

=> FILE REG

FILE 'REGISTRY' ENTERED AT 11:54:53 ON 26 AUG 2008  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2008 American Chemical Society (ACS)

=> D HIS

FILE 'HCA' ENTERED AT 11:42:26 ON 26 AUG 2008

L1 77 S SURBURG ?/AU  
L2 2558 S ROHDE ?/AU  
L3 23012 S KOCH ?/AU  
L4 1 S L1 AND L2 AND L3  
SEL RN

FILE 'REGISTRY' ENTERED AT 11:42:55 ON 26 AUG 2008

L5 1 S 3664-64-0  
L6 1 S 41096-60-0  
E 7-NONEN-2-ONE, 4,8-DIMETHYL-/CN  
L7 2 S E5 OR E6 OR E7 OR E8  
L8 3 S L5 OR L7  
E 2-NONANONE, 4,8-DIMETHYL-/CN  
L9 1 S E4 OR E5 OR E6  
L10 2 S L6 OR L9

FILE 'ZCA' ENTERED AT 11:49:45 ON 26 AUG 2008

L11 46 S L8  
L12 10 S L10  
L13 2 S L11 AND L12  
L14 8 S L12 NOT L13  
L15 44 S L11 NOT (L13 OR L14)  
L16 2 S 1840-2003/PY,PRY,AY AND L13  
L17 8 S 1840-2003/PY,PRY,AY AND L14  
L18 41 S 1840-2003/PY,PRY,AY AND L15

=> FILE ZCA

FILE 'ZCA' ENTERED AT 11:55:05 ON 26 AUG 2008  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)

=> D L13 1-2 BIB ABS HITSTR HITRN

L13 ANSWER 1 OF 2 ZCA COPYRIGHT 2008 ACS on STN

AN 142:140848 ZCA Full-text

TI Use of 4,8-dimethyl-7-nonen-2-one and 4,8-dimethylnonan-2-one as perfumes

IN Surburg, Horst; Rohde, Ute; Koch, Oskar

PA Symrise GmbH & Co. KG, Germany

SO PCT Int. Appl., 31 pp.

CODEN: PIXXD2

DT Patent

LA German

FAN.CNT 1

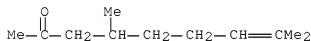
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	
PI	WO 2005004825	A1	20050120	WO 2004-EP51112	20040615
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
DE	10330865	A1	20050127	DE 2003-10330865	20030709
EP	1682230	A1	20060726	EP 2004-741800	20040615
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK			
US	20060166857	A1	20060727	US 2006-563875	20060109
PRAI	DE 2003-10330865	A	20030709		
	WO 2004-EP51112	W	20040615		

AB The invention relates to the use of 4,8-dimethyl-7-nonen-2-one and 4,8-dimethylnonan-2-one as perfumes with a rose scent. The invention also relates to corresponding perfume compns., perfumed products and methods for creating or intensifying a rose scent. The perfumes can be added to cosmetic preps. and to detergents. Thus 4,8-dimethyl-7-nonen-2-one and 4,8-dimethylnonan-2-one were prepd. by Raney-nickel hydrogenation of 4,8-dimethyl-3,7-nonadien-2-one. A perfume was prepd. from (w/%): 10-undecenal 2; Datilat 15; 9-decenol 1; eugenol 5; Guaiac wood oil 7; Indoflor 2;  $\alpha$ -ionone 20;  $\beta$ -ionone 7; cyclohexadecanone 17; 10% phenylacetaldehyde in dipropylene glycol 7; Pyroprunat 10; 10% rose oxide in dipropylene glycol; total 100 wt. parts; to this mixt. 125 wt. parts 4,8-dimethyl-7-nonen-2-one and 125 wt. parts 4,8-dimethylnonan-2-one were added.

IT 3664-64-OP, 4,8-Dimethyl-7-nonen-2-one 41096-60-OP  
 , 4,8-Dimethylnonan-2-one  
 (use of 4,8-di-Me-7-nonen-2-one and 4,8-dimethylnonan-2-one as perfumes)

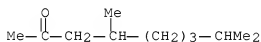
RN 3664-64-0 ZCA

CN 7-Nonen-2-one, 4,8-dimethyl- (CA INDEX NAME)



RN 41096-60-0 ZCA

CN 2-Nonanone, 4,8-dimethyl- (CA INDEX NAME)



IT 3664-64-OP, 4,8-Dimethyl-7-nonen-2-one 41096-60-OP  
 , 4,8-Dimethylnonan-2-one  
 (use of 4,8-di-Me-7-nonen-2-one and 4,8-dimethylnonan-2-one as perfumes)

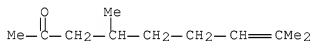
L13 ANSWER 2 OF 2 ZCA COPYRIGHT 2008 ACS on STN

AN 129:27585 ZCA [Full-text](#)

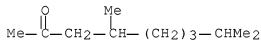
OREF 129:5879a,5882a

TI Ruthenium-Catalyzed  $\beta$ -Allyl Elimination Leading to Selective Cleavage of a Carbon-Carbon Bond in Homoallyl Alcohols

AU Kondo, Teruyuki; Kodoi, Kouichi; Nishinaga, Eiji; Okada, Takumi;  
 Morisaki, Yasuhiro; Watanabe, Yoshihisa; Mitsudo, Take-aki  
 CS Department of Energy and Hydrocarbon Chemistry Graduate School of  
 Engineering, Kyoto University, Kyoto, 606-8501, Japan  
 SO Journal of the American Chemical Society (1998), 120(22), 5587-5588  
 CODEN: JACSAT; ISSN: 0002-7863  
 PB American Chemical Society  
 DT Journal  
 LA English  
 AB RuCl<sub>2</sub>(PPh<sub>3</sub>)<sub>3</sub> is a highly effective catalyst for the deallylation of  
 tertiary homoallyl alcs. Under 10 atm of carbon monoxide at 180° in  
 the presence of 5 mol % RuCl<sub>2</sub>(PPh<sub>3</sub>)<sub>3</sub> catalyst and with an excess amt.  
 of allyl acetate in THF, various tertiary homoallyl alcs. were  
 converted to ketones and alkenes in high yields via selective  
 cleavage of a C-C bond. For example, deallylation of 2-phenylpent-4-  
 en-2-ol gave acetophenone in an isolated yield of 91% together with  
 propene in 54% yield.  
 IT 3664-64-0P  
 (ruthenium-catalyzed β-allyl elimination leading to  
 selective cleavage of carbon-carbon bond in homoallyl alcs.)  
 RN 3664-64-0 ZCA  
 CN 7-Nonen-2-one, 4,8-dimethyl- (CA INDEX NAME)



IT 41096-60-0P, 2-Nonanone, 4,8-dimethyl-  
 (ruthenium-catalyzed β-allyl elimination leading to  
 selective cleavage of carbon-carbon bond in homoallyl alcs.)  
 RN 41096-60-0 ZCA  
 CN 2-Nonanone, 4,8-dimethyl- (CA INDEX NAME)



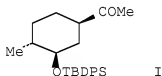
IT 3664-64-0P  
 (ruthenium-catalyzed β-allyl elimination leading to  
 selective cleavage of carbon-carbon bond in homoallyl alcs.)  
 IT 41096-60-0P, 2-Nonanone, 4,8-dimethyl-

(ruthenium-catalyzed  $\beta$ -allyl elimination leading to selective cleavage of carbon-carbon bond in homoallyl alcs.)

RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> D L14 1-8 BIB ABS HITSTR HITRN

L14 ANSWER 1 OF 8 ZCA COPYRIGHT 2008 ACS on STN  
AN 134:252075 ZCA Full-text  
TI Synthesis of enantiopure homoallylic ethers by reagent controlled facial selective allylation of chiral ketones  
AU Tietze, Lutz F.; Weigand, Berthold; Volkel, Ludwig; Wulff, Christian; Bittner, Christian  
CS Institut für Organische Chemie Georg-August-Universität Göttingen, Göttingen, 37077, Germany  
SO Chemistry--A European Journal (2001), 7(1), 161-168  
CODEN: CEUJED; ISSN: 0947-6539  
PB Wiley-VCH Verlag GmbH  
DT Journal  
LA English  
OS CASREACT 134:252075  
GI



AB The stereoselective allylation of chiral Me ketones to give tertiary homoallylic ethers, which can easily be transformed into homoallylic alcs., is described. Reaction of the enantiopure ketones (I), (R)-Me<sub>2</sub>CH(CH<sub>2</sub>)<sub>3</sub>CH( $\beta$ Me)CH<sub>2</sub>COMe, (R)-MeCH( $\beta$ OSiPh<sub>2</sub>CMe<sub>3</sub>)CH<sub>2</sub>COMe, (S)-MeCH( $\alpha$ Ph)CH<sub>2</sub>COMe and the racemic ketones MeCH(OSiPh<sub>2</sub>CMe<sub>3</sub>)CH<sub>2</sub>COMe, MeCH(Ph)CH<sub>2</sub>COMe, MeCH<sub>2</sub>CH(Ph)COMe, MeCH<sub>2</sub>CH(Me)COMe with the norpseudophedrine deriv. and allylsilane in the presence of a catalytic amt. of trifluoromethanesulfonic acid, led to a series of homoallylic ethers with good to excellent diastereoselectivity (85:15 to > 97:3). The allylation is reagent controlled and nearly independent from the stereogenic centers in the substrates. A

partial kinetic resoln. was obsd. using the racemic ketones. In the reaction of the chiral ketones with the achiral reagents ethoxytrimethylsilane and allylsilane only a low diastereoselectivity was obsd.

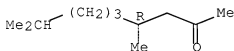
IT 76035-98-8P

(synthesis of enantiopure homoallylic ethers by reagent controlled facial selective allylation of chiral ketones)

RN 76035-98-8 ZCA

CN 2-Nonanone, 4,8-dimethyl-, (4R)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



IT 76035-98-8P

(synthesis of enantiopure homoallylic ethers by reagent controlled facial selective allylation of chiral ketones)

RE.CNT 64 THERE ARE 64 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 2 OF 8 ZCA COPYRIGHT 2008 ACS on STN

AN 94:15877 ZCA Full-text

OREF 94:2667a,2670a

TI Catalytic extended double bond migration with retention of configuration: a "zip-reaction"

AU Weissberger, E.; Stockis, A.; Carr, D. D.; Giebfried, J.

CS Res. Lab., Eastman Kodak Co., Rochester, NY, 14650, USA

SO Bulletin des Societes Chimiques Belges (1980), 89(4), 281-7

CODEN: BSCBAG; ISSN: 0037-9646

DT Journal

LA English

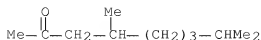
AB Isomerizing (+)-citronellol in the presence of Fe(CO)<sub>5</sub> gave (+)-dihydrocitronellol in 16±1% optical yield at 140°, presumably via a succession of 1,3-H shifts on the basis of isolated partially isomerized intermediates and isomerization products of deuterated citronellols. The obsd. partial retention of configuration suggests that metal-olefin disocn. occurs after the completion of 1,7-isomerization.

IT 41096-60-0P 76035-93-8P

(prepn. of)

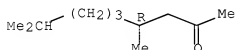
RN 41096-60-0 ZCA

CN 2-Nonanone, 4,8-dimethyl- (CA INDEX NAME)



RN 76035-98-8 ZCA  
 CN 2-Nonanone, 4,8-dimethyl-, (4R)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



IT 41096-60-0P 76035-98-8P  
 (prepn. of)

L14 ANSWER 3 OF 8 ZCA COPYRIGHT 2008 ACS on STN

AN 79:136237 ZCA [Full-text](#)

OREF 79:22081a,22084a

TI Stereochemistry of migrating carbon in Wagner-Meerwein rearrangement

AU Shono, T.; Fujita, K.; Kumai, S.

CS Dep. Synth. Chem., Kyoto Univ., Kyoto, Japan

SO Tetrahedron Letters (1973), (33), 3123-6

CODEN: TELEAY; ISSN: 0040-4039

DT Journal

LA English

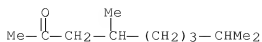
AB The optically active amine  $\text{RCHMeCH}_2\text{NH}_2$  [ $\text{R} = \text{Me}_2\text{CH}(\text{CH}_2)_3\text{CHMe}$ ], prepd. in 5 steps from d-citronellal, was deaminated with  $\text{HNO}_2$  to give 11.8%  $\text{RCH}_2\text{CHMe}_2$ , 7.4%  $\text{RCH}(\text{OH})\text{Et}$ , 73.4%  $\text{RCHMeCH}_2\text{OH}$ , and 7.4%  $\text{RCMe}_2\text{OH}$ .  $\text{RCH}_2\text{CHMe}_2$  from migration of asym. C was oxidized to  $\text{RCH}_2\text{C}(\text{O})\text{Me}$  whose optical activity was the same as the ketone prepd. from d-citronellal. Thus, the stereochem. of the migrating C was retained indicating a partial bonded transition state.

IT 41096-60-0P

(prepn. of)

RN 41096-60-0 ZCA

CN 2-Nonanone, 4,8-dimethyl- (CA INDEX NAME)



IT 41096-60-0P  
(prepn. of)

L14 ANSWER 4 OF 8 ZCA COPYRIGHT 2008 ACS on STN

AN 78:136467 ZCA Full-text

OREF 78:21929a,21932a

TI Diolefinic aliphatic compounds

IN Henrick, Clive A.

PA Zoecon Corp.

SO Fr. Demande, 66 pp.

CODEN: FRXXBL

DT Patent

LA French

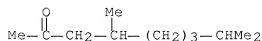
FAN.CNT 4

	PATENT NO. ----- -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
PI	FR 2124279	A5	19720922	FR 1972-2777	197201 27
	FR 2124279	A1	19720922		
	FR 2124279	B1	19780203		
	US 3752843	A	19730814	US 1971-187898	197110 08
	ZA 7107341	A	19730627	ZA 1971-7341	197111 02
	US 3816484	A	19740611	US 1971-201162	197111 22
	US 3824290	A	19740716	US 1971-206519	197112 09
	US 3855322	A	19741217	US 1971-206918	197112 10
	IL 38486	A	19750728	IL 1971-38486	197112 30



AT 319910	B	19750110	AT 1972-317	197201 14
IT 972142	B	19740520	IT 1972-20052	197201 31
HU 166175	B	19750128	HU 1972-20114	197201 31
RO 62770	A1	19780215	RO 1972-73287	197202 15
US 4021461	A	19770503	US 1972-265922	197206 23
US 3833635	A	19740903	US 1972-302983	197211 01
AT 7400089	A	19751115	AT 1974-89	197401 07
AT 331556	B	19760825		197602 02
CA 1005823	A2	19770222	CA 1976-244761	
PRAI US 1971-111673	A	19710201		
US 1971-111767		19710201		
US 1971-187898		19711008		
US 1971-111701	A2	19710201		
US 1971-11673	A	19710201		
US 1971-11701	A	19710201		
US 1971-11767	A	19710201		
CA 1971-127229	A3	19711109		
US 1971-201102	A2	19711122		
AT 1972-317	A	19720114		
US 1972-265922	A2	19720623		
AB	<p>Insacticidal alkadienecarboxylates with juvenile hormone activity, such as Me<sub>2</sub>CH(CH<sub>2</sub>)<sub>3</sub>CHMeCH<sub>2</sub>CH:CHCMe:CHCO<sub>2</sub>H (I) and its esters and amides were prepd. Thus Me<sub>2</sub>CH(CH<sub>2</sub>)<sub>3</sub>CHMeCH<sub>2</sub>-CHO was treated with MeCOCH<sub>2</sub>P(OEt)<sub>2</sub> to give MeCOCH:-CHCH<sub>2</sub>CHMe(CH<sub>2</sub>)<sub>3</sub>CHMe<sub>2</sub>, which on treatment with EtO<sub>2</sub>C-CH<sub>2</sub>P(OEt)<sub>2</sub> followed by hydrolysis of the ester gave I. The title compd. (I), useful as antiinflammatory drug and for the treatment of gastric ulcer, was prepd.in ~100% yield and increased purity by esterification of the alc. (II) under mild conditions with (PhCH<sub>2</sub>O<sub>2</sub>CCH<sub>2</sub>CH<sub>2</sub>CO)<sub>2</sub>O in pyridine or PhCH<sub>2</sub>O<sub>2</sub>-CCH<sub>2</sub>CH<sub>2</sub>COCl in pyridine-dioxane at 80-90° and room temp., resp., followed by hydrogenolytic PhCH<sub>2</sub> group cleavage of III.</p>			

IT 41096-60-0P  
 (prepn. of)  
 RN 41096-60-0 ZCA  
 CN 2-Nonanone, 4,8-dimethyl- (CA INDEX NAME)



IT 41096-60-0P  
 (prepn. of)

L14 ANSWER 5 OF 8 ZCA COPYRIGHT 2008 ACS on STN

AN 78:110633 ZCA Full-text

OREF 78:17759a,17762a

TI Aliphatic diolefins

IN Henrick, Clive A.

PA Zoecon Corp.

SO Ger. Offen., 94 pp.

CODEN: GWXXBX

DT Patent

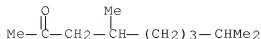
LA German

FAN.CNT 4

	PATENT NO. -----	KIND ---	DATE -----	APPLICATION NO. -----	DATE
PI	DE 2202016	A	19721123	DE 1972-2202016	197201 17
	DE 2202016	B2	19770811		
	US 3752843	A	19730814	US 1971-187898	197110 08
	ZA 7107341	A	19730627	ZA 1971-7341	197111 02
	CA 1005821	A1	19770222	CA 1971-127229	197111 09
	US 3816484	A	19740611	US 1971-201162	197111 22
	AU 7136208	A	19730531	AU 1971-36208	197111

GB 1368266	A	19740925	GB 1971-55200	26 197111 29
US 3824290	A	19740716	US 1971-206519	197112 09
US 3855322	A	19741217	US 1971-206918	197112 10
IL 38486	A	19750728	IL 1971-38486	197112 30
NL 7200632	A	19720803	NL 1972-632	197201 17
BE 778241	A1	19720516	BE 1972-113025	197201 19
JP 48044430	A	19730626	JP 1972-8245	197201 21
JP 52005573 SE 385870	B B	19770215 19760726	SE 1972-992	197201 28
CH 579526	A5	19760915	CH 1972-1265	197201 28
DD 100855	A5	19731012	DD 1972-160596	197201 31
IT 972142	B	19740520	IT 1972-20052	197201 31
DD 107202	A5	19740720	DD 1972-165207	197201 31
DD 107850	A5	19740820	DD 1972-165190	197201 31
RO 62770	A1	19780215	RO 1972-73287	197202 15
US 4021461	A	19770503	US 1972-265922	197206 23

US 3833635	A	19740903	US 1972-302983	19721101
AT 7400089	A	19751115	AT 1974-89	19740107
AT 331556	B	19760825		
JP 51110512	A	19760930	JP 1975-22364	19750221
CA 1005823	A2	19770222	CA 1976-244761	19760202
PRAI US 1971-111673	A	19710201		
US 1971-111701	A	19710201		
US 1971-111767	A	19710201		
US 1971-187898	A	19711008		
US 1971-11673	A	19710201		
US 1971-11701	A	19710201		
US 1971-11767	A	19710201		
CA 1971-127229	A3	19711109		
US 1971-201102	A2	19711122		
AT 1972-317	A	19720114		
US 1972-265922	A2	19720623		
AB	Alkadienyl acids, esters, nitriles, and amides were prep'd. by treating an aldehyde or ketone with a phosphine or phosphono comp'd. contg. the corresponding acid deriv. Thus, MeCH <sub>2</sub> CHMe(CH <sub>2</sub> ) <sub>3</sub> CHEtCH <sub>2</sub> CHO and (EtO) <sub>2</sub> P(O)CH <sub>2</sub> CMe:CHCO <sub>2</sub> Et in the presence of NaH gave E- and Z-EtO <sub>2</sub> CCH:CMeCH:CHCH <sub>2</sub> CHEt(CH <sub>2</sub> ) <sub>3</sub> CHMeCH <sub>2</sub> Me; (EtO) <sub>2</sub> P(O)CH <sub>2</sub> CN and MeCOCH:CHCH <sub>2</sub> CHMe(CH <sub>2</sub> ) <sub>3</sub> CMe <sub>2</sub> Et in the presence of NaH gave E- and Z-Me <sub>2</sub> C <sub>2</sub> Et(CH <sub>2</sub> ) <sub>3</sub> CHMeCH <sub>2</sub> CH:CHCHMe:CHCN; and (EtO) <sub>2</sub> P(O)CH <sub>2</sub> CONEt <sub>2</sub> and MeCOCH:CHCH <sub>2</sub> CHMe(CH <sub>2</sub> ) <sub>3</sub> CHMeEt gave E- and Z-EtCHMe(CH <sub>2</sub> ) <sub>3</sub> CHMeCH <sub>2</sub> CH:CHCMe:CHCONEt <sub>2</sub> . These products were converted by known methods to aldehydes, alcs., ethers, sulfides, and amines, and several were tested as insecticides.			
IT	41096-60-0P (prepn. of)			
RN	41096-60-0 ZCA			
CN	2-Nonanone, 4,8-dimethyl- (CA INDEX NAME)			



IT 41696-60-0P  
(prepn. of)

L14 ANSWER 6 OF 8 ZCA COPYRIGHT 2008 ACS on STN

AN 59:15934 ZCA Full-text

OREF 59:2925b-g

TI Amino sugar synthesis. XXV. Epimerization of N-substituted 2-amino-2-deoxyhexononitriles

AU Kuhn, Richard; Jochims, Johannes C.

CS Max Planck Inst. Med. Forsch., Heidelberg, Germany

SO Chemische Berichte (1963), 96, 983-9

CODEN: CHBEAM; ISSN: 0009-2940

DT Journal

LA Unavailable

GI For diagram(s), see printed CA Issue.

AB cf. CA 55, 27094b; 58, 12658f. Epimerization of N-substituted 2-amino-2-deoxyhexononitriles by heating in alcs. occurred by the reversible formation of HCN and pentosimines, and not via an intermediate imino lactone. 2-Deoxy-2-(diphenylmethylamino)-1-imino-D-galactono-1,4-lactone (I), m. 136-7° (C5H5N-Et2O),  $[\alpha]_{19D} -66^\circ$  (c 1, C5H5N), was prepd. in 0.75-g. yield by shaking 1 g. 2-deoxy-2-(diphenylmethylamino)-D-galactononitrile (II) (obtained from the epimeric mixt. of 2-deoxy-2-(diphenylmethylamino)-D-galacto(D-talo)-hexononitriles) (CA 55, 27089d) by fractional crystn., with 1% KOH in MeOH at 25° until dissolved, keeping at -25° for 3 h., filtering, washing with Et2O, and purifying by dissolving in dry C5H5N and pptg. with Et2O. The rotation of I changed rapidly in hot iso-PrOH with the formation of a brown sirup with no nitrile band in the IR spectrum. Thus, I is not an intermediate in the epimerization of II. (+)-3,7-Dimethyloctanal (III), b13 79-82°,  $[\alpha]_{20D} 9.0^\circ$ , was prepd. in 81% yield by hydrogenating (+)-3,7-dimethyl-6-octenal over Pd-BaSO4 in 95% EtOH. (-)-3,7-Dimethyl-1-(9-fluorenylimino)octane (IV), m. 67-8°,  $[\alpha]_{22D} -2^\circ$  (c 2.3, C5H5N), was prepd. in 20-g. crude yield by heating 20 g. III with an equimolar amt. of 9-aminofluorene in 40 cc. Et2O until a clear soln. was obtained, and crystg. the crude Schiff base from pentane. (-)-4,8-Dimethyl-2-(9-fluorenylamino)nonanenitrile (V) (12.3 g.), m. 64-6° (sinters at 58°),  $[\alpha]_{20D} -55^\circ$  (c 1.1, C5H5N), was obtained in 0.26-g. yield from 15 g. of purified IV dissolved in 100 cc. abs. EtOH, by introducing 15 cc. of anhyd. HCN at 0°, and keeping 24 h. at -78°. (+)-4,8-Dimethyl-2-phenylaminononanenitrile (VI) (1.07 g.), m. 62-4° (pentane),  $[\alpha]_{22D} 157^\circ$  (c 1.0, MeOH),  $[\alpha]_{20D} 164^\circ$  (c 1.5, C5H5N), was obtained from 10 g. III and an equimolar amt. of PhNH2 in 20 cc. abs. EtOH, and the Schiff base, not isolated, treated with anhyd. HCN. Similarly, (-)-2-benzylamino-4,8-dimethylnonanenitrile hydrochloride (VII) (1.2 g.), m. 123-8° (PrOH),  $[\alpha]_{20D} -16^\circ$  (c 1.1, MeOH),  $[\alpha]_{25D}$

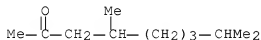
62° (c 2.0, C<sub>5</sub>H<sub>5</sub>N), was prepd. from 5 g. III by introducing HCl gas into an Et<sub>2</sub>O soln. of the sirupy amino nitrile. III (50 g.) in 50 cc. Et<sub>2</sub>O treated with MeMgI and the crude carbinol fractionally distd. gave 86% alc. (VIII), b<sub>13</sub> 102-6°, which (20 g.) was oxidized with 25 g. K<sub>2</sub>Cr<sub>2</sub>O<sub>7</sub> in 20.5 g. H<sub>2</sub>SO<sub>4</sub> and 125 cc. H<sub>2</sub>O to provide 17.5 g. (+)-4,8-dimethyl-2-nonanone (IX), b<sub>12-14</sub> 89-93°, [α]<sub>D</sub> 20D 3.02. IX (2.5 g.) dissolved in 2.6 g. 4-biphenylamine in 5 cc. HOAc was treated with 1 g. KCN in 1.5 cc. H<sub>2</sub>O, the mixt. shaken vigorously for 2 min., kept 10 h. at 10°, and the crude product recrystd. from pentane-methylcyclohexane, heptane-methyleyclohexane, and CHCl<sub>3</sub>-pentane to give 1.3 g. (-)-2-(4-biphenylamino)-2,4,8-trimethylnonanenitrile (X), m. 98-100°, [α]<sub>D</sub> 20D -41° (c 1.7, C<sub>5</sub>H<sub>5</sub>N). Equil. mixts. formed by dissolving 1 g. VI, X, or 2-benzylamino-2-deoxy-D-glucononitrile (XI) in 100 cc. iso-ProH to give HCN and Schiff bases were detd. by analyzing for HCN by addn. of AgNO<sub>3</sub>, filtration of AgCN, and titrn. with KSCN. Extent of dissocn. was given: (aminonitrile, temp., % dissocn.) VI, 30°, <1%; VI, 60°, 3%; VI, 80°, 4%; X, 30°, 33%; X, 45°, 50%; X, 60°, 58%; XI, 40°, 6%; XI, 65°, 10%; XI, 80°, 15%. Epimerization of N-substituted α-aminonitriles is thus not limited to sugar derivs.

IT 41096-60-0

(Derived from data in the 7th Collective Formula Index  
(1962-1966))

RN 41096-60-0 ZCA

CN 2-Nonanone, 4,8-dimethyl- (CA INDEX NAME)

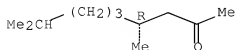


IT 76035-98-8P, 2-Nonanone, 4,8-dimethyl-, (+)-  
(prepn. of)

RN 76035-98-8 ZCA

CN 2-Nonanone, 4,8-dimethyl-, (4R)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



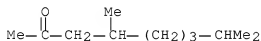
IT 41096-60-0  
(Derived from data in the 7th Collective Formula Index  
(1962-1966))

IT 75035-98-8P, 2-Nonanone, 4,8-dimethyl-, (+)-  
(prepn. of)

L14 ANSWER 7 OF 8 ZCA COPYRIGHT 2008 ACS on STN  
AN 52:65610 ZCA Full-text  
OREF 52:11738a-b  
TI Ketonization of dihydrocitronellic acid  
AU Yeh, Ping-Yuan; Chow, Yuan-Lang  
CS Natl. Taiwan Univ., Taipei, Taiwan  
SO Perfumery and Essential Oil Record (1958), 49, 70-2  
CODEN: PEORAA; ISSN: 0369-8998  
DT Journal  
LA Unavailable  
AB Catalytic ketonization of dihydrocitronellic acid (I) by means of  
ferrous oxide catalyst gave 20% yield of 2,6,10,14-tetramethyl-8-  
pentadecanone. Pyrolysis of Ca, Ba, Fe++, and Pb  
dihydrocitronellates was also attempted. Pyrolysis of the Pb salt  
gave a satisfactory yield of I. 4,8-Dimethyl-2-nonanone was also  
prepd. by the Pb salt method.

IT 41096-60-0P, 2-Nonanone, 4,8-dimethyl-  
(prepn. of)

RN 41096-60-0 ZCA  
CN 2-Nonanone, 4,8-dimethyl- (CA INDEX NAME)



IT 41096-60-0P, 2-Nonanone, 4,8-dimethyl-  
(prepn. of)

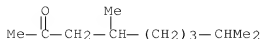
L14 ANSWER 8 OF 8 ZCA COPYRIGHT 2008 ACS on STN  
AN 47:41118 ZCA Full-text  
OREF 47:6867d-i  
TI Hydroxy fatty acids  
AU Breusch, F. L.; Baykut, Fikret  
CS Univ. Istanbul, Turk.  
SO Rev. faculte sci. univ. Istanbul (1951), 16a, 137-43  
DT Journal  
LA German

AB cf. C.A. 46, 3946a. Some 2,3- and 3,5-HO fatty acids are prepd. by oxidn. of the unsatd. acid and the Reformatskii reaction with HO ketones, resp. BuCH: CHCO<sub>2</sub>H (2.6 g.), 4 g. Na<sub>2</sub>CO<sub>3</sub>, and 1.2 l. H<sub>2</sub>O below 10° were treated with 3.2 g. KMnO<sub>4</sub> in 150 mL. H<sub>2</sub>O in 1 portion, and an excess of Na<sub>2</sub>SO<sub>3</sub> and 10% H<sub>2</sub>SO<sub>4</sub> was stirred in after 5 min., the soln. continuously extd. with ether for 2 days, the ether evapd., and the colorless crystals washed with petr. ether to yield 25% (crude) 2,3-dihydroxyheptanoic acid, m. 114-15° (from Me<sub>2</sub>CO-C<sub>6</sub>H<sub>6</sub>), sol. in alc. and Me<sub>2</sub>CO, insol. in petr. ether. 2,3-Dihydroxyoctanoic acid (15%), m. 118-19°, moderately sol. in H<sub>2</sub>O, 2,3-dihydroxytridecanoic acid, m. 126°, slightly sol. in C<sub>6</sub>H<sub>6</sub>, and 2,3-dihydroxy-5,9-dimethyldecanoic acid, (20%), m. 74.5-5.5°), were prepd. in the same manner. 5,9-Dimethyl-2-decenoic acid, b<sub>5</sub> 150-3°, [bis(p-dimethylaminophenyl)ureide, yellow crystals from alc., m. 112°], for the prepn of the corresponding dihydroxy acid was formed from CH<sub>2</sub>(CO<sub>2</sub>H)<sub>2</sub> and 3,7-dimethyloctanol. C<sub>6</sub>H<sub>6</sub> (10 mL.), 8.5 g. BrCH<sub>2</sub>CO<sub>2</sub>-Et, and 8.5 g. 4-hydroxy-2-decanone were added slowly with rapid stirring and initial heating to 3.5 g. Zn, the resulting ester treated with 3 g. KOH in 30 mL. EtOH 12 h. at room temp., 200 mL. H<sub>2</sub>O added, the soln. extd. 6 times with ether, the H<sub>2</sub>O layer was acidified with 10 % H<sub>2</sub>SO<sub>4</sub>, extd. with ether, and the ether washed with H<sub>2</sub>O, dried with Na<sub>2</sub>SO<sub>4</sub>, filtered, and evapd. to a colorless oil, 3,5-dihydroxy-3-methylundecanoic acid 5-lactone (p-bromobenzylpseudothiuronium salt, colorless crystals, m. 132-3°). 3,5-Dihydroxy-3-methyl-dodecanoic acid 5-lactone, colorless oil (p-bromobenzylpseudothiuronium salt, colorless crystals, m. 138°), 3-hydroxy-3,5,9-trimethyldecanoic acid, colorless oil (70%) [bis(p-dimethylaminophenyl)ureide, C<sub>30</sub>H<sub>46</sub>O<sub>3</sub>N<sub>4</sub>, colorless crystals from alc., m. 112°], and 3-hydroxy-2,3,5,9-tetramethyldecanoic acid, viscous colorless oil (50%), (p-bromobenzylpseudothiuronium salt, colorless crystals, m. 113-14°), were prepd. in the same manner. Oxidn. of 80 g. tetrahydrogeraniol in 1 l. H<sub>2</sub>O at 10-20° with finely powd. KMnO<sub>4</sub>, bleaching with Na<sub>2</sub>SO<sub>3</sub> in 10% H<sub>2</sub>SO<sub>4</sub>, and distn. gave 45 g. 3,7-dimethyloctanoic acid; its Ba salt heated at 400° with 300 g. Ba(OAc)<sub>2</sub> yielded 18 g. 4,8-dimethyl-2-nonanone, b<sub>45</sub> 130-3° (semicarbazone, colorless crystals from alc., m. 87°), which was used in the prepn. of the two 3-HO acids.

IT 41096-60-0P, 2-Nonanone, 4,8-dimethyl-  
(prepn. of)

RN 41096-60-0 ZCA

CN 2-Nonanone, 4,8-dimethyl- (CA INDEX NAME)





IT 41096-60-0P, 2-Nonanone, 4,8-dimethyl-  
(prepn. of)

=> D L18 1-41 BIB ABS HITSTR HITRN

L18 ANSWER 1 OF 41 ZCA COPYRIGHT 2008 ACS on STN

AN 141:350297 ZCA Full-text

TI Process for producing (1R,6R)-2,2,6-trimethylcyclohexyl methyl  
ketone and/or (1R,6S)-2,2,6-trimethylcyclohexyl methyl ketone  
IN Ujihara, Hideo; Watanabe, Shinya; Yamamoto, Takeshi; Hagiwara,  
Mitsutoshi

PA Takasago International Corporation, Japan

SO Eur. Pat. Appl., 18 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	
PI	EP 1468978	A1	20041020	EP 2004-13984	200106 07
				<--	
	R: CH, DE, ES, FR, GB, LI, NL				
	JP 2001348353	A	20011218	JP 2000-170822	200006 07
				<--	
	EP 1162191	A2	20011212	EP 2001-401473	200106 07
				<--	
	EP 1162191	A3	20020904		
	EP 1162191	B1	20050629		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,				
	PT, IE, SI, LT, LV, FI, RO				
PRAI	JP 2000-170822	A	20000607	<--	
	EP 2001-401473	A3	20010607	<--	
OS	MARPAT 141:350297				
AB	The invention relates to a process for producing (1S,6R)-2,2,6-trimethylcyclohexyl Me ketone and/or (1R,6S)-2,2,6-trimethylcyclohexyl Me ketone from (3R)- or (3S)-citronellal. Thus,				

(3S)-citronellal was converted to (4S)-4,8-dimethyl-2,7-(and 1,7)-nonadienyl-2-yl acetate which was cyclized to (1R,6S)-2,2,6-trimethylcyclohexyl Me ketone (I). I was treated with EtMgCl and MeCHO to give (1R,6S)-(2,2,6-trimethylcyclohexyl)-2-buten-1-one. A unique, novel eucalyptus, mint-like and white floral perfume material can be provided using the prepd. ketone compds.

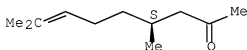
IT 82507-53-7P

(process for producing (1R,6R)-2,2,6-trimethylcyclohexyl Me ketone and/or (1R,6S)-2,2,6-trimethylcyclohexyl Me ketone)

RN 82507-53-7 ZCA

CN 7-Nonen-2-one, 4,8-dimethyl-, (4S)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



IT 82507-53-7P

(process for producing (1R,6R)-2,2,6-trimethylcyclohexyl Me ketone and/or (1R,6S)-2,2,6-trimethylcyclohexyl Me ketone)

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 2 OF 41 ZCA COPYRIGHT 2008 ACS on STN

AN 140:235334 ZCA Full-text

TI Catalytic conversions in water. Part 23: Steric effects and increased substrate scope in the palladium-neocuproine catalyzed aerobic oxidation of alcohols in aqueous solvents

AU ten Brink, Gerd-jan; Arends, Isabel W. C. E.; Hoogenraad, Marcel; Verspui, Goeran; Sheldon, Roger A.

CS Laboratory for Biocatalysis and Organic Chemistry, Delft University of Technology, Delft, 2628 BL, Neth.

SO Advanced Synthesis & Catalysis (2003), 345(12), 1341-1352  
CODEN: ASCAF7; ISSN: 1615-4150

PB Wiley-VCH Verlag GmbH & Co. KGaA

DT Journal

LA English

OS CASREACT 140:235334

AB The steric influence of substituents on the 2- and 9-positions of phenanthroline in the (2,9-R2-1,10-phenanthroline)palladium(II)-catalyzed aerobic oxidn. of 2-hexanol was investigated by means of high throughput experimentation. (Neocuproine)Pd-(OAc)2 (R=CH3) was found to be a highly active catalyst for alc. oxidn. in 1:1

water/DMSO mixts. The catalyst is unique in that it tolerates water, polar co-solvents and a wide variety of functional groups in the alc. Turn-over frequencies of > 1500 h<sup>-1</sup> were achieved and a series of alcs. was oxidized with 0.1 to 0.5 mol % of catalyst.

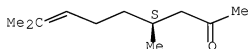
IT 82507-53-7P

(steric effects and increased substrate scope in the palladium-neocuproine catalyzed aerobic oxidn. of alcs. in aq. solvents)

RN 82507-53-7 ZCA

CN 7-Nonen-2-one, 4,8-dimethyl-, (4S)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



IT 82507-53-7P

(steric effects and increased substrate scope in the palladium-neocuproine catalyzed aerobic oxidn. of alcs. in aq. solvents)

RE.CNT 90 THERE ARE 90 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 3 OF 41 ZCA COPYRIGHT 2008 ACS on STN

AN 139:378160 ZCA Full-text

TI Insect chemistry and chirality

AU Hayes, Patricia Y.; Fletcher, Mary T.; Chow, Sharon; McGrath, Matthew J.; Tu, Yong Q.; Zhang, Hesheng; Hungerford, Natasha L.; McErlean, Christopher S. P.; Stok, Jeannette E.; Moore, Christopher J.; DeVoss, James J.; Kitching, William

CS Department of Chemistry, The University of Queensland, Brisbane, Australia

SO Chirality (2003), 15(Suppl.), S116-S127

CODEN: CHRLEP; ISSN: 0899-0042

PB Wiley-Liss, Inc.

DT Journal

LA English

AB Examn. of the chem. of a no. of Australian insect species provided examples of unusual structures and encouraged detns. of their abs. stereochem. by stereocontrolled syntheses and chromatog. comparisons. Inter alia, studies with the fruit-spotting bug (*Amblypelta nitida*), certain parasitic wasps (*Blosteres* sp.), the aposematic shield bug (*Cantao parentum*), and various species of scarab grubs are

summarized. The detn. of enantiomeric excesses (ee's) for component epoxides, lactones, spiroacetals, and allenes are described. Stereochem. and related aspects of the biosynthesis of spiroacetals in certain fruit-fly species (Bactrocerae sp.) are also presented.

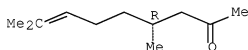
IT 89272-56-0P

(in synthesis of insect hydrocarbons and assessment of chirality)

RN 89272-56-0 ZCA

CN 7-Nonen-2-one, 4,8-dimethyl-, (4R)- (CA INDEX NAME)

Absolute stereochemistry.



IT 89272-56-0P

(in synthesis of insect hydrocarbons and assessment of chirality)

RE.CNT 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 4 OF 41 ZCA COPYRIGHT 2008 ACS on STN

AN 139:265438 ZCA Full-text

TI Preparation of a fragrance composition containing the isomers of optically active trans-1-(2,2,6-trimethylcyclohexyl)-2-buten-1-one  
IN Yamamoto, Takeshi; Watanabe, Shinya; Ujihara, Hideo; Hagiwara, Toshimitsu

PA Takasago International Corporation, Japan

SO Eur. Pat. Appl., 26 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	
PI	EP 1347036	A2	20030924	EP 2003-6163	20030319
				<--	
	EP 1347036	A3	20040317		
	EP 1347036	B1	20080625		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				

JP 2003277311

A

20031002

JP 2002-81953

200203  
22

US 20030207790

A1

20031106

US 2003-390733

200303  
19

US 6930083

B2

20050816

PRAI

JP 2002-81953

A

20020322 &lt;--

AB

A geometrical isomer compn. excellent in odor and in chem. resistance, which is applicable to a base material contg. a strongly alk. chem. or a strongly acidic chem., which can suppress the deterioration with time and the color change of the base material in the case that the material is exposed to light, and which also have highly tasteful and unique fruity floral fragrance is disclosed. A geometrical isomer compn. contg. 93-99% of optically active trans-1-(2,2,6-trimethylcyclohexyl)-2-buten-1-one (I) or a mixt. and 1-7% by wt. of optically active cis-1-(2,2,6-trimethylcyclohexyl)-2-buten-1-one or a mixt. is used. Thus, I was prepd. in a series of steps starting from optically active 4,8-dimethyl-7-nonen-2-ol. A formulation contained I 0.2, ammonium thioglycolate 10.0, aq. NH3 1.5, Nikkol BO-20 1.0, propylene glycol 5, sodium edetate 0.1, and water 88.2%.

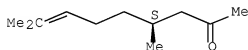
IT 82507-53-7P

(prepn. of fragrance compn. contg. isomers of optically active trimethylcyclohexylbutenones)

RN 82507-53-7 ZCA

CN 7-Nonen-2-one, 4,8-dimethyl-, (4S)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



IT 82507-53-7P

(prepn. of fragrance compn. contg. isomers of optically active trimethylcyclohexylbutenones)

L18 ANSWER 5 OF 41 ZCA COPYRIGHT 2008 ACS on STN

AN 139:265437 ZCA [Full-text](#)

TI Preparation of a fragrance composition containing isomers of optically active ethyl trimethylcyclohexylcarboxylate

IN Yamamoto, Takeshi; Wawtanabe, Shinya; Ujihara, Hideo; Hagiwara,  
Toshimitsu  
PA Takasago International Corporation, Japan  
SO Eur. Pat. Appl., 24 pp.  
CODEN: EPXXDW  
DT Patent  
LA English  
FAN.CNT 1

	PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
PI	EP 1347035	A2	20030924	EP 2003-6162	200303 19

<--

EP 1347035	A3	20040317		
EP 1347035	B1	20080723		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				

US 20030207789	A1	20031106	US 2003-390752	200303 19
----------------	----	----------	----------------	--------------

<--

JP 2004002325	A	20040108	JP 2003-75926	200303 19
---------------	---	----------	---------------	--------------

<--

PRAI JP 2002-81954 A 20020322 <--

AB A geometrical isomer compn. excellent in odor and in chem. resistance, which is applicable to a base material contg. a strongly alk. chem. or a strongly acidic chem., which can suppress the deterioration with time and the color change of the base material in the case that the material is exposed to light, and which also have highly palatable and unique fruity floral fragrance is disclosed. The compn. is produced by mixing 93-99% by wt. of optically active Et trans-2,2,6-trimethylcyclohexylcarboxylate (I) or a mixt. and 1-7% of optically active Et cis-2,2,6-trimethylcyclohexylcarboxylate or a mixt., resp. Thus, I was prepd. in a series of steps starting from (4S)-4,8-dimethyl-7-nonen-2-ol. A formulation contained I 3.0, NaOCl 4.0, PEG lauryl ether sulfate sodium salt 2.0, sodium 2-ethylhexyl sulfate 2.0, NaOH 1.0, I 0.1 and water qs to 100%.

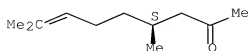
IT 82507-53-7P

(prepn. of fragrance compns. contg. isomers of optically active Et trimethylcyclohexylcarboxylate)

RN 82507-53-7 ZCA

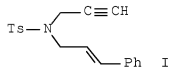
CN 7-Nonen-2-one, 4,8-dimethyl-, (4S)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



IT 82507-53-7P  
(prepn. of fragrance comps. contg. isomers of optically active  
Et trimethylcyclohexylcarboxylate)

L18 ANSWER 6 OF 41 ZCA COPYRIGHT 2008 ACS on STN  
AN 139:22084 ZCA [Full-text](#)  
TI On the mechanism of carbohydroxypalladation of enynes. Additional  
insights on the cyclization of enynes with electrophilic metal  
complexes  
AU Nevado, Cristina; Charruault, Lise; Michelet, Veronique;  
Nieto-Oberhuber, Cristina; Munoz, M. Paz; Mendez, Maria; Rager,  
Marie-Noelle; Genet, Jean-Pierre; Echavarren, Antonio M.  
CS Departamento de Quimica Organica, Universidad Autonoma de Madrid,  
Madrid, 28049, Spain  
SO European Journal of Organic Chemistry (2003), (4), 706-713  
CODEN: EJOCFK; ISSN: 1434-193X  
PB Wiley-VCH Verlag GmbH & Co. KGaA  
DT Journal  
LA English  
OS CASREACT 139:22084  
GI



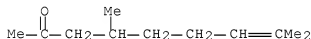
AB Different mechanisms have been proposed for the cyclization of  
enynes, e.g., I, catalyzed by electrophilic metal halides or  
complexes. We present evidence to indicate that the previously  
reported "carbohydroxypalladation" and the "hydroxycyclization  
catalyzed by PtII" are closely related reactions. Thus, palladium

complexes formed in situ from PdCl<sub>2</sub> and trisulfonated phosphane TPPTS or cyclic phosphite P(OCH<sub>2</sub>)<sub>3</sub>CET, as the ligands, catalyze the methoxy- or hydroxycyclization of enynes with selectivities similar to those obsd. with PtII complexes. Deuteration studies indicate that activation of the alkyne by PdII promotes an anti-addn. of the alkene.

IT 3664-64-0P, 4,8-Dimethyl-7-nonen-2-one  
(byproduct from the attempted methoxycyclization of dimethylnonenyne)

RN 3664-64-0 ZCA

CN 7-Nonen-2-one, 4,8-dimethyl- (CA INDEX NAME)



IT 3664-64-0P, 4,8-Dimethyl-7-nonen-2-one  
(byproduct from the attempted methoxycyclization of dimethylnonenyne)

RE.CNT 67 THERE ARE 67 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 7 OF 41 ZCA COPYRIGHT 2008 ACS on STN

AN 138:368540 ZCA [Full-text](#)

TI Synthesis and odor of optically active trans-2,2,6-trimethylcyclohexyl methyl ketones and their related compounds

AU Yamamoto, Takeshi; Ujihara, Hideo; Watanabe, Shinya; Harada, Makoto; Matsuda, Hiroyuki; Hagiwara, Toshimitsu

CS Central Research Laboratory, Takasago International Corporation, Hiratsuka, Kanagawa, 254-0073, Japan

SO Tetrahedron (2003), 59(4), 517-524

CODEN: TETRAB; ISSN: 0040-4020

PB Elsevier Science Ltd.

DT Journal

LA English

OS CASREACT 138:368540

AB The syntheses of (1R,6S)-and (1S,6R)-2,2,6-trimethylcyclohexyl Me ketones (I) and (II) via cationic olefin cyclizations of ketone enol esters and their odor is described. (E)-(1R,6S)-and(E)-(1S,6R)-1-(2,2,6-trimethylcyclohexyl)-2-buten-1-one were prepd. via stereoselective aldol condensation of I and II, followed by dehydration. (1R,6S)-Et 2,2,6-trimethylcyclohexylcarboxylate was prepd. via stereoselective oxidn. of I.

IT 82597-53-7P

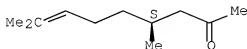


(synthesis and odor of trimethylcyclohexyl ketones via cationic olefin cyclization, stereoselective aldol condensation, and stereoselective oxidn.)

RN 82507-53-7 ZCA

CN 7-Nonen-2-one, 4,8-dimethyl-, (4S)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



IT 82507-53-7F

(synthesis and odor of trimethylcyclohexyl ketones via cationic olefin cyclization, stereoselective aldol condensation, and stereoselective oxidn.)

RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 8 OF 41 ZCA COPYRIGHT 2008 ACS on STN

AN 137:47320 ZCA [Full-text](#)

TI Stereoselective Prins cyclizations of  $\delta$ ,  $\epsilon$ -unsaturated ketones to cis-3-chlorocyclohexanols with  $\text{TiCl}_4$

AU Davis, Chad E.; Coates, Robert M.

CS Department of Chemistry, University of Illinois, Urbana, IL, 61801, USA

SO Angewandte Chemie, International Edition (2002), 41(3), 491-493

CODEN: ACIEF5; ISSN: 1433-7851

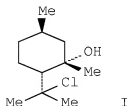
PB Wiley-VCH Verlag GmbH

DT Journal

LA English

OS CASREACT 137:47320

GI

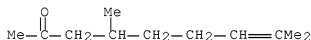


AB TiCl4-mediated Prins cyclization of  $\delta$ , $\epsilon$ -unsatd. ketones provides a simple stereoselective annulation method for construction of thermodynamically stable, tertiary cyclohexanols, e.g., 1, with incorporation of a cis-chloro substituent. Alternatively, use of HCl in place of TiCl4 provided the trans-chlorohydrins with variable selectivity and higher proportions of undesired cyclic olefins.

IT 3664-64-0P  
(stereoselective prepn. of chlorocyclohexanols via titanium catalyzed Prins cyclizations of  $\delta$ , $\epsilon$ -unsatd. ketones)

RN 3664-64-0 ZCA

CN 7-Nonen-2-one, 4,8-dimethyl- (CA INDEX NAME)



IT 3664-64-0P  
(stereoselective prepn. of chlorocyclohexanols via titanium catalyzed Prins cyclizations of  $\delta$ , $\epsilon$ -unsatd. ketones)

RE.CNT 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 9 OF 41 ZCA COPYRIGHT 2008 ACS on STN

AN 136:309698 ZCA [Full-text](#)

TI Preparation of 2,2,6-trimethylcyclohexyl trichloromethyl ketone and 2,2,6-trimethylcyclohexanecarboxylic acids

IN Harada, Mutsumi; Matsuda, Hiroyuki; Ujihara, Hideo; Watabe, Shinya; Yamamoto, Takeshi

PA Takasago Perfumery Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

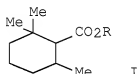
DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	
	-----				
PI	JP 2002114738	A	20020416	JP 2000-309192	

PRAI JP 2000-309192 20001010 <--  
OS CASREACT 136:309698; MARPAT 136:309698  
GI



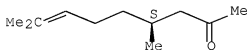
AB The compds. I (R = H, C1-4 alkyl) are prepd. by oxidn. of 2,2,6-trimethylcyclohexyl Me ketone with hypochlorites and decompn. of 2,2,6-trimethylcyclohexyl trichloromethyl ketone with MOR (M = alkali metal; R = H, C1-4 alkyl). (1R,6S)-2,2,6-trimethylcyclohexyl Me ketone was oxidized with NaClO in the presence of NaOH and trioctylmethylammonium chloride in hexane at 60° for 24 h to give 60% (1R,6S)-2,2,6-trimethylcyclohexyl trichloromethyl ketone, which was treated with NaOH in the presence of NaClO and Bu4NCl and Na2SO4 at 60-100° for 8 h to give 96% (1R,6S)-2,2,6-trimethylcyclohexanecarboxylic acid.

IT 82507-53-7P  
(prepn. of trimethylcyclohexyl trichloromethyl ketone and trimethylcyclohexanecarboxylic acids)

RN 82507-53-7 ZCA

CN 7-Nonen-2-one, 4,8-dimethyl-, (4S)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



IT 82507-53-7P  
(prepn. of trimethylcyclohexyl trichloromethyl ketone and trimethylcyclohexanecarboxylic acids)

L18 ANSWER 10 OF 41 ZCA COPYRIGHT 2008 ACS on STN  
 AN 136:167525 ZCA Full-text  
 TI Preparation of 2,2,6-trimethylcyclohexanecarboxylic acid from  
 2,2,6-trimethylcyclohexyl methyl ketone  
 IN Harada, Mutsumi; Matsuda, Hiroyuki; Ujihara, Hideo; Watabe, Shinya;  
 Yamamoto, Takeshi  
 PA Takasago Perfumery Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 6 pp.  
 CODEN: JKXXAF

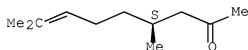
DT Patent  
 LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	
PI	JP 2002053520	A	20020219	JP 2000-242570	200008 10

PRAI JP 2000-242570 20000810 <--<--  
 OS CASREACT 136:167525  
 AB 2,2,6-Trimethylcyclohexanecarboxylic acid (I), useful as an  
 intermediate for fragrant substances, is prepd. by oxidn. of 2,2,6-  
 trimethylcyclohexyl Me ketone (II). Thus, (1R,6S)-II was oxidized by  
 HNO3 at 90° for 3 h in H2O to give 98% (1R,6S)-I.  
 IT 82507-53-7P  
 (prepn. of 2,2,6-trimethylcyclohexanecarboxylic acid by oxidn. of  
 2,2,6-trimethylcyclohexyl Me ketone by HNO3)  
 RN 82507-53-7 ZCA  
 CN 7-Nonen-2-one, 4,8-dimethyl-, (4S)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



IT 82507-53-7P  
 (prepn. of 2,2,6-trimethylcyclohexanecarboxylic acid by oxidn. of  
 2,2,6-trimethylcyclohexyl Me ketone by HNO3)

L18 ANSWER 11 OF 41 ZCA COPYRIGHT 2008 ACS on STN  
 AN 136:37794 ZCA Full-text  
 TI Process for producing (1S,6R)- and/or (1R,6S)-2,2,6-

trimethylcyclohexyl methyl ketone and perfume compositions  
containing them

IN Ujihara, Hideo; Watanabe, Shinya; Yamamoto, Takeshi; Toshimitsu,  
Hagiwara

PA Takasago International Corporation, Japan

SO Eur. Pat. Appl., 17 pp.

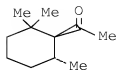
CODEN: EPXXDW

DT Patent

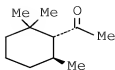
LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	---	-----	-----	
PI	EP 1162191	A2	20011212	EP 2001-401473	200106 07
				<--	
	EP 1162191	A3	20020904		
	EP 1162191	B1	20050629		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2001348353	A	20011218	JP 2000-170822	200006 07
				<--	
	US 20020042356	A1	20020411	US 2001-876883	200106 07
				<--	
	US 6770618	B2	20040803		
	EP 1468978	A1	20041020	EP 2004-13984	200106 07
				<--	
	R: CH, DE, ES, FR, GB, LI, NL				
	ES 2244567	T3	20051216	ES 2001-401473	200106 07
				<--	
PRAI	JP 2000-170822	A	20000607	<--	
	EP 2001-401473	A3	20010607	<--	
OS	CASREACT 136:37794				
GI					



I



II

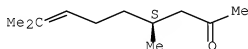
AB A process for producing trans-2,2,6-trimethylcyclohexyl Me ketone, which is the (1S,6R)-2,2,6-trimethylcyclohexyl Me ketone (I) and/or (1R,6S)-2,2,6-trimethylcyclohexyl Me ketone (II), is described. Thus, I was prepd. from (R)-citronellol via condensation with EtMgBr in THF, Jones oxidn. in MeCOMe, acetylation with isopropenyl acetate contg. p-MeC<sub>6</sub>H<sub>4</sub>SO<sub>3</sub>H and cyclization with 85% H<sub>3</sub>PO<sub>4</sub> in PhMe. A unique, novel eucalyptus, mint-like and white floral perfume material can be provided using the ketone compds. disclosed in the present invention as well by the prodn. process disclosed therein.

IT 82507-53-7P, (4S)-4,8-Dimethyl-7-nonen-2-one  
(prepn of (1S,6R)- and/or (1R,6S)-2,2,6-trimethylcyclohexyl Me ketone for use in perfumes and colognes)

RN 82507-53-7 ZCA

CN 7-Nonen-2-one, 4,8-dimethyl-, (4S)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



IT 82507-53-7P, (4S)-4,8-Dimethyl-7-nonen-2-one  
(prepn of (1S,6R)- and/or (1R,6S)-2,2,6-trimethylcyclohexyl Me ketone for use in perfumes and colognes)

L18 ANSWER 12 OF 41 ZCA COPYRIGHT 2008 ACS on STN

AN 134:115792 ZCA [Full-text](#)

TI Synthesis and stereochemistry of insect derived spiroacetals with branched carbon skeletons

AU Tu, Yong Q.; Hubener, Achim; Zhang, Hesheng; Moore, Christopher J.; Fletcher, Mary T.; Hayes, Patricia; Dettner, Konrad; Francke, Wittko; McErlean, Christopher S. P.; Kitching, William

CS Department of Chemistry, The University of Queensland, Brisbane, 4072, Australia

SO Synthesis (2006), (13), 1956-1978  
 CODEN: SYNTBF; ISSN: 0039-7881

PB Georg Thieme Verlag  
 DT Journal  
 LA English  
 OS CASREACT 134:115792

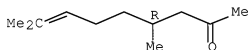
AB About thirty constitutionally different spiroacetals have been characterized from insects but only three have branched carbon skeletons. Two are based on the 1,7-dioxaspiro[5.5]undecane system and are certain stereoisomers of the 2,4,8-tri-Me deriv., from the aposematic shield bug, *Cantao parentum* (White), and a 2,2,8-tri-Me deriv. from the rove beetle, *Ontholestes murinus* (L). The 1,6-dioxaspiro[4.5]decane system is represented by a stereoisomer of the 2,3,7-tri-Me deriv. in the *Cantao* species. The elucidation of their structures and stereochem. by spectroscopy, synthesis and enantioselective gas chromatog. is described.

IT 89272-56-0P  
 (prepn. and stereochem. of insect derived spiroacetals with branched carbon skeletons)

RN 89272-56-0 ZCA

CN 7-Nonen-2-one, 4,8-dimethyl-, (4R)- (CA INDEX NAME)

Absolute stereochemistry.



IT 89272-56-0P  
 (prepn. and stereochem. of insect derived spiroacetals with branched carbon skeletons)

RE.CNT 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 13 OF 41 ZCA COPYRIGHT 2008 ACS on STN

AN 131:101437 ZCA Full-text

TI Effect of extraction techniques on the chemical composition and antioxidant activity of *Eucalyptus camaldulensis* var. *brevirostris* leaf oils

AU Fadel, Hoda; Marx, Friedhelm; El-Sawy, Abdalla; El-Ghorab, Ahemd

CS Chemistry Flavor Aromatic Department, National Research Center, Cairo, Egypt

SO Zeitschrift fuer Lebensmittel-Untersuchung und -Forschung A: Food Research and Technology (1999), 208(3), 212-216

CODEN: ZLFAFA; ISSN: 1431-4630

PB Springer-Verlag

DT Journal

LA English

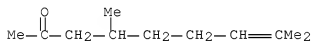
AB The volatile oil compns. of *Eucalyptus camaldulensis* var. *brevirostris* leaves obtained by hydrodistn. (HD) and supercrit. fluid extn. methods (SFE) were analyzed qual. and quant. by GLC-MS. Ninety different components were sepd. and most of them identified. In both exts. the main constituents were found to be  $\beta$ -phellandrene (8.94 and 4.09%), p-cymene (24.01 and 10.61%), cryptone (12.71 and 9.82%) and spathulenol (14.43 and 13.14%). The yield of the monoterpene hydrocarbons in HD oil (0.288 g/100 g fresh leaves) was slightly higher compared with that in the SFE ext. (0.242 g/100 g fresh leaves). The SFE ext. possessed higher concns. of the sesquiterpenes, light oxygenated compds. and heavy oxygenated compds. than the HD oil. The relationship between the antioxidant activity and chem. compn. of the extd. oils was investigated. The significant amts. of p-cymen-7-ol and thymol are responsible for the antioxidative activity of both exts. The concn. of both compds., but esp. that of p-cymen-7-ol (2.25%), is higher in the SFE ext. This corresponds with the higher antioxidative activity of the SFE compared with the HD ext. P-cymen-7-ol, a compd. newly identified in leaves of *Eucalyptus* species, exhibited superior antioxidant activity in comparison with that of butylated hydroxyanisole.

IT 3664-64-0

(effect of extn. techniques on the chem. compn. and antioxidant activity of *Eucalyptus camaldulensis* var. *brevirostris* leaf oils)

RN 3664-64-0 ZCA

CN 7-Nonen-2-one, 4,8-dimethyl- (CA INDEX NAME)



IT 3664-64-0

(effect of extn. techniques on the chem. compn. and antioxidant activity of *Eucalyptus camaldulensis* var. *brevirostris* leaf oils)

RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 14 OF 41 ZCA COPYRIGHT 2008 ACS on STN

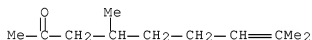
AN 123:8778 ZCA Full-text

OREF 123:1855a,1858a

TI Organoaluminum-promoted direct conversion of aldehydes to the



homologous ketones or oxiranes with diazoalkanes  
 AU Maruoka, Keiji; Concepcion, Arnel B.; Yamamoto, Hisashi  
 CS Sch. Eng., Nagoya Univ., Nagoya, 464-01, Japan  
 SO Synlett (1994), (7), 521-3  
 CODEN: SYNLES; ISSN: 0936-5214  
 DT Journal  
 LA English  
 OS CASREACT 123:8778  
 AB Organoaluminum-promoted single homologation of aliph. and arom. aldehydes with diazoalkanes has been described. Among various organoaluminum reagents, exceptionally bulky methylaluminum bis(2,6-di-tert-butyl-4-methylphenoxide) (MAD) is found to be highly effective for the selective transformation of aliph. aldehydes to homologous ketones, while aluminum tris(2,6-diphenylphenoxide) (ATPH) enables the conversion of various aldehydes to oxiranes with diazomethane.  
 IT 3664-64-0P  
 (prepn. of)  
 RN 3664-64-0 ZCA  
 CN 7-Nonen-2-one, 4,8-dimethyl- (CA INDEX NAME)



IT 3664-64-0P  
 (prepn. of)  
 L18 ANSWER 15 OF 41 ZCA COPYRIGHT 2008 ACS on STN  
 AN 122:290484 ZCA Full-text  
 OREF 122:52959a,52962a  
 TI From (R)-(+)-pulegone to (2S,4R,6R,8S)-2,4,8-trimethyl-1,7-dioxaspiro[5.5]undecane - a unique spiroacetal from the insect kingdom  
 AU Tu, Yong Q.; Moore, Christopher J.; Kitching, William  
 CS Dep. Chem., Univ. Queensland, Brisbane, 4072, Australia  
 SO Tetrahedron: Asymmetry (1995), 6(2), 397-400  
 CODEN: TASYE3; ISSN: 0957-4166  
 PB Elsevier  
 DT Journal  
 LA English  
 OS CASREACT 122:290484  
 AB Enantioselective synthesis of the unique, insect-derived spiroacetal, (2S,4R,6R,8S)-2,4,8-trimethyl-1,7-dioxaspiro[5.5]undecane and some

diastereomers, utilizing (R)-(+)-pulegone as chiral source-material, and asym. dihydroxylation as a key step, are described.

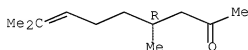
IT 89272-56-0P

(stereoselective prepn. of trimethyldioxazsiroundecane from pulegone)

RN 89272-56-0 ZCA

CN 7-Nonen-2-one, 4,8-dimethyl-, (4R)- (CA INDEX NAME)

Absolute stereochemistry.



IT 89272-56-0P

(stereoselective prepn. of trimethyldioxazsiroundecane from pulegone)

L18 ANSWER 16 OF 41 ZCA COPYRIGHT 2008 ACS on STN

AN 122:265067 ZCA Full-text

OREF 122:48389a,48392a

TI Synthesis and bioassay of all four stereoisomers of (2E,4E)-4,6,10,12-tetramethyl-2,4-tridecadien-7-one, the assignment of the absolute configuration of the sex pheromone of *Matsucoccus matsumurae* Japanese pine bast scale

AU Lin, Guo-Qiang; Xu, Wei-Chu; Qi, Yun-Tai; Chen, Guo-Min

CS Shanghai Institute Organic Chemistry, Chinese Academy Sciences, Shanghai, 200032, Peop. Rep. China

SO Chinese Journal of Chemistry (1995), 13(1), 85-94

CODEN: CJOCEV; ISSN: 1001-604X

PB Science Press

DT Journal

LA English

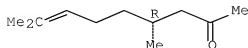
AB A facile enantioselective synthesis of all four stereoisomers of (2E,4E)-4,6,10,12-tetramethyl-2,4-tridecadien-7-one (I) is described. The stereochem. at C-6 and C-10 of I was constructed by using optically active citronellal as starting material and by the asym. crotylic metal reaction. In the bioassay and field tests, only (6R,10R)-I was active. The other three isomers were inactive. Therefore, the naturally occurring pheromone was assigned as (6R,10R)-I.

IT 89272-56-0P

(synthesis and pheromone activity of all four stereoisomers of (2E,4E)-4,6,10,12-tetramethyl-2,4-tridecadien-7-one)

RN 89272-56-0 ZCA  
CN 7-Nonen-2-one, 4,8-dimethyl-, (4R)- (CA INDEX NAME)

Absolute stereochemistry.



IT 89272-56-0P  
(synthesis and pheromone activity of all four stereoisomers of  
(2E,4E)-4,6,10,12-tetramethyl-2,4-tridecadien-7-one)

L18 ANSWER 17 OF 41 ZCA COPYRIGHT 2008 ACS on STN

AN 122:55346 ZCA [Full-text](#)

OREF 122:10727a,10730a

TI Regio- and stereoselective hydrogenation of conjugated carbonyl  
compounds via palladium assisted hydrogen transfer by ammonium  
formate

AU Ranu, Brindaban C.; Sarkar, Arunkanti

CS Department of Organic Chemistry, Indian Association for the  
Cultivation of Science, Calcutta, 700 032, India

SO Tetrahedron Letters (1994), 35(46), 8649-50

CODEN: TELEAY; ISSN: 0040-4039

PB Elsevier

DT Journal

LA English

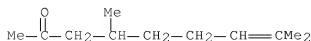
OS CASREACT 122:55346

AB Excellent regio- and stereoselectivity has been achieved by using  
ammonium formate/Pd-C in the hydrogenation of the C=C bond conjugated  
to carbonyl group in presence of olefin.

IT 3664-64-0P, 7-Nonen-2-one, 4,8-dimethyl-  
(regio- and stereoselective hydrogenation of conjugated carbonyl  
comps. via palladium assisted hydrogen transfer by ammonium  
formate)

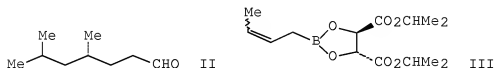
RN 3664-64-0 ZCA

CN 7-Nonen-2-one, 4,8-dimethyl- (CA INDEX NAME)



IT 3664-64-0P, 7-Nonen-2-one, 4,8-dimethyl-  
(regio- and stereoselective hydrogenation of conjugated carbonyl  
comps. via palladium assisted hydrogen transfer by ammonium  
formate)

L18 ANSWER 18 OF 41 ZCA COPYRIGHT 2008 ACS on STN  
AN 120:134079 ZCA [Full-text](#)  
OREF 120:23599a,23602a  
TI Enantioselective synthesis of all four stereoisomers of  
(2E,4E)-4,6,10,12-tetramethyl-2,4-tridecadien-7-one, the sex  
pheromone of Matsucoccus pine bast scale  
AU Lin, Guoqiang; Xu, Weichu  
CS Shanghai Inst. Org. Chem., Chin. Acad. Sci., Shanghai, 200032, Peop.  
Rep. China  
SO Tetrahedron Letters (1993), 34(37), 5931-4  
CODEN: TELEAY; ISSN: 0040-4039  
DT Journal  
LA English  
OS CASREACT 120:134079  
GI

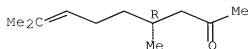


AB A facile enantioselective synthesis of all four stereoisomers of  
(2E,4E)-4,6,10,12-tetramethyl-2,4-tridecadien-7-one (I) (6R,10R;  
6S,10R; 6R,10S; 6S,10S), the primary sex pheromone of Matsucoccus  
pine bast scale is described. The stereochem. at C-6 and C-10 of I  
was constructed by using optically active citronellal as starting  
material and by the asym. aldol reaction of (R)-heptanal II or its S  
isomer with (E)- and (Z)-boronates III.

IT 89272-56-0P  
(intermediate in enantioselective synthesis of  
tetramethyltridecadienone stereoisomers)

RN 89272-56-0 ZCA  
CN 7-Nonen-2-one, 4,8-dimethyl-, (4R)- (CA INDEX NAME)

Absolute stereochemistry.



IT 89272-56-0P

(intermediate in enantioselective synthesis of tetramethyltridecadienone stereoisomers)

L18 ANSWER 19 OF 41 ZCA COPYRIGHT 2008 ACS on STN

AN 116:194598 ZCA [Full-text](#)

OREF 116:32989a,32992a

TI The acid-catalyzed cyclizations of unsaturated carbonyl compounds utilizing silica gel at high pressure

AU Dauben, William G.; Hendricks, Robert T.

CS Dep. Chem., Univ. California, Berkeley, CA, 94720, USA

SO Tetrahedron Letters (1992), 33(5), 603-6

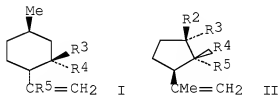
CODEN: TELEAY; ISSN: 0040-4039

DT Journal

LA English

OS CASREACT 116:194598

GI



AB The ene-like cyclizations of a series of unsatd. carbonyl compds. were studied using silica gel at high pressure (15 kbar) as a new catalytic system. This new method is general for forming 5- and 6-membered ring carbocycles. Thus, treating  $\text{R}_1\text{CH}_2\text{CHMeCH}_2\text{CH}_2\text{CH:CR}_2\text{Me}$  ( $\text{R}_1 = \text{CHO}$ ,  $\text{R}_2 = \text{Me}$ ) with silica gel 48h at  $25^\circ$  and 15 kbar gave 58% menthadienes I ( $\text{R}_3 = \text{OH}$ ,  $\text{R}_4 = \text{H}$ ,  $\text{R}_5 = \text{Me}$ ) and 15% I ( $\text{R}_3 = \text{H}$ ,  $\text{R}_4 =$

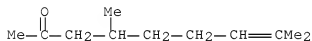
OH, R5 = Me); similarly, R1CHMeCH2CH2CH:CMc2 (R = CHO) gave 14% cyclopentanes II (R2 = Me, R3 = R5 = H, R4 = OH), 26% II (R2 = R5 = H, R3 = Me, R4 = OH), and 38% II (R2 = Me, R3 = R4 = H, R5 = OH). The mildness of this method was demonstrated by the successful cyclization of a vinyl cyclopropyl aldehyde.

IT 3664-64-0

(cyclization of, by silica gel at high pressure, menthenols from)

RN 3664-64-0 ZCA

CN 7-Nonen-2-one, 4,8-dimethyl- (CA INDEX NAME)



IT 3664-64-0

(cyclization of, by silica gel at high pressure, menthenols from)

L18 ANSWER 20 OF 41 ZCA COPYRIGHT 2008 ACS on STN

AN 115:231928 ZCA [Full-text](#)

OREF 115:39513a,39516a

TI Synthetic Microbial Chemistry XXIV.-Synthesis of antibiotic 1233A, an inhibitor of cholesterol biosynthesis

AU Mori, Kenji; Takahashi, Yoshio

CS Dep. Agric. Chem., Univ. Tokyo, Tokyo, 113, Japan

SO Liebigs Annalen der Chemie (1991), (10), 1057-65

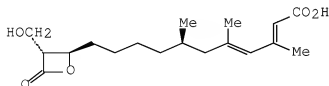
CODEN: LACHDL; ISSN: 0170-2041

DT Journal

LA English

OS CASREACT 115:231928

GI



AB A synthesis of antibiotic 1233A (I) was achieved by employing (R)-HOCH<sub>2</sub>CH(CH<sub>2</sub>OAc)CH:CH<sub>2</sub> and (R)-citronellic acid as chiral building blocks. The former was prepd. by lipase-mediated asym. hydrolysis of its diacetate.

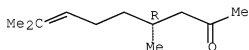
IT 89272-56-0P

(prepn. and ketalization of)

RN 89272-56-0 ZCA

CN 7-Nonen-2-one, 4,8-dimethyl-, (4R)- (CA INDEX NAME)

Absolute stereochemistry.



IT 89272-56-0P

(prepn. and ketalization of)

L18 ANSWER 21 OF 41 ZCA COPYRIGHT 2008 ACS on STN

AN 112:158654 ZCA [Full-text](#)

OREF 112:26827a,26830a

TI Halogen effect on the ring opening of pulegone hydrohalides

AU Shull, Brian K.; Koreeda, Masato

CS Dep. Chem., Univ. Michigan, Ann Arbor, MI, 48109, USA

SO Journal of Organic Chemistry (1990), 55(7), 2249-51

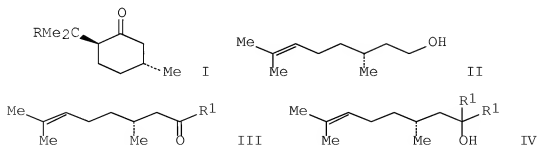
CODEN: JOCEAH; ISSN: 0022-3263

DT Journal

LA English

OS CASREACT 112:158654

GI



AB Treatment of pulegone hydrohalides I (R = Cl, Br, iodo) with LiAlH<sub>4</sub> gave (R)-(+)-citronellol (II) in 16%, 45%, and 60% yield, resp., whereas treatment of I (R = Cl, Br, iodo) with DIBAL gave II in 79%, 59% and 0% yield, resp. With the exception of LiAlH<sub>4</sub>, the yields of the ring-opening products with non-carbon nucleophiles decreased as the at. wt. of the starting hydrohalide halogen increased. A variety of carbon nucleophiles also cause a similar ring-opening reaction of the pulegone hydrohalides. With carbon nucleophiles, I (R = Cl) gave the best yield for the formation of the ring-opened products III (R1 = Me, Bu, CMe<sub>3</sub>, Ph), whereas treatment of I (R = iodo) with MeLi, BuLi, and PhLi gave mixts. of pulegone and the bis-adducts IV (R1 = Me, Bu, Ph). The relative propensity of I (R = Br, iodo) for ring opening of the initial mono-adduct contributes to the greater formation of bis-adducts with the exception of the reaction with t-BuLi.

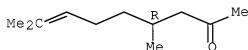
IT 89272-56-0P

(prepn. of, via ring cleavage of pulegone hydrohalides by methylolithium)

RN 89272-56-0 ZCA

CN 7-Nonen-2-one, 4,8-dimethyl-, (4R)- (CA INDEX NAME)

Absolute stereochemistry.



IT 89272-56-0P

(prepn. of, via ring cleavage of pulegone hydrohalides by methylolithium)

L18 ANSWER 22 OF 41 ZCA COPYRIGHT 2008 ACS on STN

AN 112:115758 ZCA [Full-text](#)

OREF 112:19535a,19538a

TI Chemical constituents of the volatile oil of fresh flowers of *Elaeagnus angustifolia* L

AU Li, Zhaolin; Chen, Ning; Xue, Dunyuan; Li, Haiquan; Chen, Yaozu

CS Anal. Test. Cent., Lanzhou Univ., Lanzhou, Peop. Rep. China

SO Gaodeng Xuexiao Huaxue Xuebao (1989), 10(8), 804-8

CODEN: KTHPDM; ISSN: 0251-0790

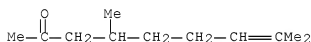
DT Journal



LA Chinese  
 AB The essential oil of fresh flowers of *E. angustifolia* was extd. by simultaneous steam distn.-solvent extn. The yield of the oil was 0.1% of fresh flowers. By using capillary gas chromatog.-mass spectrometry, 85 constituents were sepd., of which 47 compds. constituting 96.51% of the oil were identified. The major ingredient was trans-ethyl cinnamate, accounting for ≤78.88% of the oil.

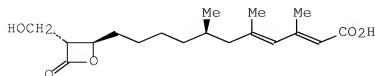
IT 3664-64-0  
 (from *Elaeagnus angustifolia* flower oil)

RN 3664-64-0 ZCA  
 CN 7-Nonen-2-one, 4,8-dimethyl- (CA INDEX NAME)



IT 3664-64-0  
 (from *Elaeagnus angustifolia* flower oil)

L18 ANSWER 23 OF 41 ZCA COPYRIGHT 2008 ACS on STN  
 AN 111:232410 ZCA [Full-text](#)  
 OREF 111:38597a,38600a  
 TI Total synthesis of L-659,699, a novel inhibitor of cholesterol biosynthesis  
 AU Chiang, Yuan Ching P.; Yang, Shu Shu; Heck, James V.; Chabala, John C.; Chang, Michael N.  
 CS Merck Sharp and Dohme Res. Lab., Rahway, NJ, 07065, USA  
 SO Journal of Organic Chemistry (1989), 54(24), 5708-12  
 CODEN: JOCEAH; ISSN: 0022-3263  
 DT Journal  
 LA English  
 OS CASREACT 111:232410  
 GI



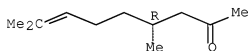
AB The total synthesis of L-659,699 (I) has been accomplished from pulegone. A key step involves a highly diastereoselective aldol condensation of chiral crotonate imide to introduce the stereogenic centers at the ring carbons.

IT 89272-56-0P  
(prepn. and ketalization of)

RN 89272-56-0 ZCA

CN 7-Nonen-2-one, 4,8-dimethyl-, (4R)- (CA INDEX NAME)

Absolute stereochemistry.



IT 89272-56-0P  
(prepn. and ketalization of)

L18 ANSWER 24 OF 41 ZCA COPYRIGHT 2008 ACS on STN

AN 105:97701 ZCA [Full-text](#)

OREF 105:15797a,15800a

TI Syntheses and growth retarding activity of trialkylammonium compounds from citronellal

AU Sharma, M. L.; Pandhi, S. B.; Talwar, K. K.; Kalsi, P. S.

CS Dep. Chem., Punjab Agric. Univ., Ludhiana, 141 004, India

SO Indian Journal of Chemistry, Section B: Organic Chemistry Including Medicinal Chemistry (1985), 24B(5), 571-3

CODEN: IJSBDB; ISSN: 0376-4699

DT Journal

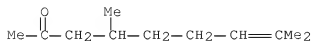
LA English

OS CASREACT 105:97701

AB N,N,N-Trimethyl-5,9-dimethyl-2,8-decadienylammonium iodide, N,N,N-trimethyl-2,5,9-trimethyl-2,8-decadienylammonium iodide, N,N-diethyl-N-methyl-, N,N,N-triethyl-, and N,N-diethyl-N-butyl-3,7-dimethyl-6-octenylammonium iodide, N,N-diethyl-N-methyl-3,7-dimethyl-6-octenylammonium cyanide, and N,N,N-trimethyl-1,3,7-trimethyl-6-octenylammonium iodide were prepd. and examd. as plant growth retardants. These compds. inhibit root formation in hypocotyl cuttings of Phaseolus aureus.

IT 3654-64-0P  
(prepn. and conversion of, into dimethylamino deriv.)

RN 3664-64-0 ZCA  
CN 7-Nonen-2-one, 4,8-dimethyl- (CA INDEX NAME)



IT 3664-64-0P  
(prepn. and conversion of, into dimethylamino deriv.)

L18 ANSWER 25 OF 41 ZCA COPYRIGHT 2008 ACS on STN

AN 100:121365 ZCA [Full-text](#)

OREF 100:18477a,18480a

TI Transformations of (+)-citronellal into insecticidal esters related to cut-up chrysanthemates

AU Randad, R. S.; Kulkarni, G. H.

CS Natl. Chem. Lab., Pune, 411 008, India

SO Indian Journal of Chemistry, Section B: Organic Chemistry Including Medicinal Chemistry (1983), 22B(8), 795-801

CODEN: IJSBDB; ISSN: 0376-4699

DT Journal

LA English

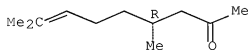
AB (R)-RO<sub>2</sub>CCH<sub>2</sub>CH<sub>2</sub>CHMeCH:CR<sub>1</sub>R<sub>2</sub> (I, R-R<sub>2</sub> = Me, Me, Cl; Me, Ph, Cl; Me, Ph, H; Me, Me, Me), bearing close resemblance to chrysanthemates, were prepd. from (+)-citronellal and then converted by transesterification to the corresponding 3-phenoxybenzyl esters I (R = CH<sub>2</sub>C<sub>6</sub>H<sub>4</sub>OPh-m).

IT 89272-56-0P  
(prepn. of, as intermediate for chrysanthemate analogs)

RN 89272-56-0 ZCA

CN 7-Nonen-2-one, 4,8-dimethyl-, (4R)- (CA INDEX NAME)

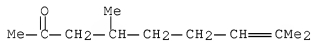
Absolute stereochemistry.



IT 89272-56-0P  
(prepn. of, as intermediate for chrysanthemate analogs)

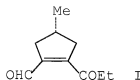
L18 ANSWER 26 OF 41 ZCA COPYRIGHT 2008 ACS on STN

AN 97:181446 ZCA Full-text  
 OREF 97:30341a,30344a  
 TI Alkylaluminum halide induced cyclization of unsaturated carbonyl compounds  
 AU Snider, Barry B.; Karras, Michael; Price, Robert T.; Rodini, David J.  
 CS Dep. Chem., Princeton Univ., Princeton, NJ, 08544, USA  
 SO Journal of Organic Chemistry (1982), 47(23), 4538-45  
 CODEN: JOCEAH; ISSN: 0022-3263  
 DT Journal  
 LA English  
 OS CASREACT 97:181446  
 AB 2,6-Dimethyl-5-heptenal (I) and 5-octenal undergo concerted ene reactions with 1 equiv of Me<sub>2</sub>AlCl and cation-olefin cyclizations with 2 equiv of MeAlCl, MeAlCl<sub>2</sub>, or EtAlCl<sub>2</sub> to give a zwitterion, which reacts to give several products including an ene adduct. 3,7-Dimethyl-6-octenal (II) and (Z)- and (E)-6-nonenal undergo only ene reactions with all catalysts. Me<sub>2</sub>C:CHCH<sub>2</sub>CH<sub>2</sub>CHMe(CH<sub>2</sub>)<sub>n</sub>CH:CHCOMe (n = 0, 1), formed by reaction of I and II with acetonylidetriphenylphosphorane, react analogously to I and II in the presence of a Lewis acid. The effect of ring size on the nature of these cyclizations is explained on the basis of thermodyn. and kinetic data.  
 IT 3664-64-0  
 (cyclization of, with alkylaluminum compds.)  
 RN 3664-64-0 ZCA  
 CN 7-Nonen-2-one, 4,8-dimethyl- (CA INDEX NAME)



IT 3664-64-0  
 (cyclization of, with alkylaluminum compds.)  
 L18 ANSWER 27 OF 41 ZCA COPYRIGHT 2008 ACS on STN  
 AN 97:55328 ZCA Full-text  
 OREF 97:9305a,9308a  
 TI Synthesis of chiral cyclopentenoids  
 AU Drtina, Gary J.; Wiemer, David F.  
 CS Dep. Chem., Univ. Iowa, Iowa City, IA, 52242, USA  
 SO Tetrahedron Letters (1992), 23(8), 803-6  
 CODEN: TELEAY; ISSN: 0040-4039  
 DT Journal

LA English  
GI



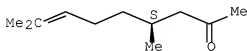
AB The methylcyclopentene I, a potential synthon in the prepn. of several diterpenoids, was prepd. from (-)-citronellal, with retention of the chiral center, by sequential Grignard reaction with  $\text{H}_2\text{C:CBREt}$ , oxidn., ozonolysis, cyclization, and ozonolysis.

IT 82507-53-7  
(ozonolysis and redn. of)

RN 82507-53-7 ZCA

CN 7-Nonen-2-one, 4,8-dimethyl-, (4S)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



IT 82507-53-7  
(ozonolysis and redn. of)

L18 ANSWER 28 OF 41 ZCA COPYRIGHT 2008 ACS on STN

AN 96:122870 ZCA Full-text

OREF 96:20181a,20184a

TI Trialkylsilyl triflate in organic synthesis. 12. Ring opening of oxiranes by trimethylsilyl trifluoromethanesulfonate

AU Murata, Sizuaki; Suzuki, Masaaki; Noyori, Ryoji

CS Dep. Chem., Nagoya Univ., Nagoya, 464, Japan

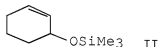
SO Bulletin of the Chemical Society of Japan (1982), 55(1), 247-54

CODEN: BCSJA8; ISSN: 0009-2673

DT Journal

LA English

OS CASREACT 96:122870  
GI

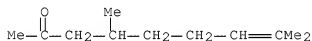


AB Me3SiOS02CF3 (I) promotes ring opening reactions of oxirane derivs. The reaction course is highly affected by the structures and substitution pattern of the substrates. Tetra-, tri-, and 2,2-substituted oxiranes and simple cycloalkene oxides are converted to the corresponding allylic alc. trimethylsilyl ethers, e.g., II. The overall transformation is interpreted in terms of trans addn. of I to the oxirane ring followed by base-promoted anti elimination of a trifluoromethanesulfonic acid element. 2,3-Dialkyl- or monoalkyloxiranes isomerize to the corresponding ketones and aldehydes, resp. (Z)-Cyclooctene oxide undergoes the transannular reaction to give endo-cis-2-trimethylsiloxybicyclo[3.3.0]octane. The reaction of 6-methyl-5-hepten-2-one oxide produces 2,2,6-trimethyl-3-trimethylsiloxy-3,4-dihydro-2H-pyran. 1,2-Me migration takes place in the reaction of (E)-3 $\alpha$ -tert-butyltrimethylsiloxy-5 $\alpha$ -pregnene 17 $\alpha$ ,20-oxide to afford 3 $\alpha$ -tert-butyltrimethylsiloxy-17 $\beta$ -methyl-17 $\alpha$ -[1-(trimethylsiloxy)ethyl]-18-nor-5 $\alpha$ -androst-13(14)-ene.  $\alpha$ -Pinene oxide gives trans-carveol trimethylsilyl ether.

IT 3664-64-0P  
(prepn. and epoxidn. of)

RN 3664-64-0 ZCA

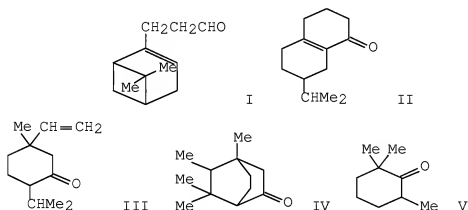
CN 7-Nonen-2-one, 4,8-dimethyl- (CA INDEX NAME)



IT 3664-64-0P  
(prepn. and epoxidn. of)

L18 ANSWER 29 OF 41 ZCA COPYRIGHT 2008 ACS on STN

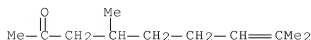
AN 95:187431 ZCA [Full-text](#)  
 OREF 95:31285a,31288a  
 TI Radical cyclizations of unsaturated aldehydes  
 AU Chatzopoulos, M.; Montheard, J. P.  
 CS Lab. Chim. Org., Unites Enseign-Rech. Sci., Saint-Etienne, 42023, Rom.  
 SO Revue Roumaine de Chimie (1981), 26(2), 275-82  
 CODEN: RRCHAX; ISSN: 0035-3930  
 DT Journal  
 LA French  
 GI



AB Ethylenic aldehydes underwent free radical cyclization to give ketones; thus, I yielded II and  $\text{Me}_2\text{C}:\text{CHCH}_2\text{CH}_2\text{CMe}(\text{CH}:\text{CH}_2)\text{CH}_2\text{CHO}$  gave III and IV when cyclized in the presence of  $\text{Me}_3\text{COOCMe}_3$  or  $(\text{BzO})_2$ . In cases where there was a choice between the formation of a cyclohexanone or cyclopentanone, the carbonyl radical added to the double bond to form a cyclohexanone ring. Thus,  $\text{Me}_2\text{C}:\text{CHCH}_2\text{CH}_2\text{CHMeCHO}$  cyclized to give V.

II 3664-64-0  
 (cyclization of, in presence of di-tert-butylperoxide)

RN 3664-64-0 ZCA  
 CN 7-Nonen-2-one, 4,8-dimethyl- (CA INDEX NAME)



IT 3664-64-0

(cyclization of, in presence of di-tert-butylperoxide)

L18 ANSWER 30 OF 41 ZCA COPYRIGHT 2008 ACS on STN

AN 94:46816 ZCA Full-text

OREF 94:7625a,7628a

TI Alkylaluminum chloride induced cyclization of unsaturated carbonyl compounds

AU Karras, Michael; Snider, Barry B.

CS Dep. Chem., Princeton Univ., Princeton, NJ, 08544, USA

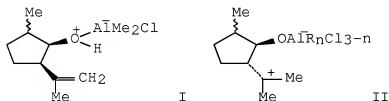
SO Journal of the American Chemical Society (1980), 102(27), 7951-3

CODEN: JACSAT; ISSN: 0002-7863

DT Journal

LA English

GI



AB 2,6-Dimethyl-5-heptenal undergoes a concerted ene reaction with 1 equiv. of  $\text{Me}_2\text{AlCl}$  at  $-80^\circ$  to give I and a cation-olefin cyclization with 2 equiv. of  $\text{Me}_2\text{AlCl}$ ,  $\text{MeAlCl}_2$ , or  $\text{EtAlCl}_2$  to give a zwitterion II ( $\text{R} = \text{Me}, \text{Et}$ ;  $n = 1, 2$ ) whose further reactions depend on the Lewis acid used and the temp. 6,7-Unsatd. ketones undergo ene reactions with  $\text{Me}_2\text{AlCl}$  as catalyst whereas 4,5- and 5,6-unsatd. ketones undergo cation-olefin cyclization with 2 equiv. of  $\text{MeAlCl}_2$  to give a zwitterion which undergoes a 1,2-hydride shift, followed by a 1,2-Me shift, to give a cyclopentanone.

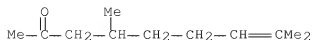
IT 3664-64-0

(alkylaluminum chloride induced cyclization of)

RN 3664-64-0 ZCA

CN 7-Nonen-2-one, 4,8-dimethyl- (CA INDEX NAME)





IT 3664-64-0

(alkylaluminum chloride induced cyclization of)

L18 ANSWER 31 OF 41 ZCA COPYRIGHT 2008 ACS on STN

AN 92:129090 ZCA Full-text

OREF 92:21062h,21063a

TI Chemical transformations of citronellal

AU Barnes, R. A.; Goncalves, S. L.; Lago, R. C. A.; Szpiz, R. R.

CS Nucl. Pesqui. Prod. Nat., Univ. Fed. Rio de Janeiro, Rio de Janeiro, 20,000, Brazil

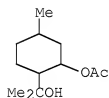
SO Int. Congr. Essent. Oils, [Pap.], 7th (1979), Meeting Date 1977, Volume 7, 253-6 Publisher: Japan Flavor Fragrance Manufactures' Assoc., Tokyo, Japan.

CODEN: 41XWA4

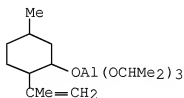
DT Conference

LA English

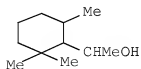
GI



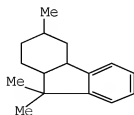
I



II



IV



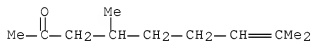
V

AB On cyclization in AcOH or reactions with Al(OCHMe<sub>2</sub>)<sub>3</sub>, MeMgI, or PhMgBr, citronellal gave I, II, Me<sub>2</sub>C:CHCH<sub>2</sub>CHg<sub>2</sub>CHMeCH<sub>2</sub>CHROH (III, R = Me, Ph), resp. Cyclization of III (R = Me, Ph) gave IV or V, resp. Me<sub>2</sub>C:CHCH<sub>2</sub>CH<sub>2</sub>CHMeCH<sub>2</sub>CH(OH)CN and Me<sub>2</sub>C:CHCH<sub>2</sub>CH<sub>2</sub>CHMeCH<sub>2</sub>CH(OAc)CN were also prepd.

IT 3664-64-0F  
(prepn. of)

RN 3664-64-0 ZCA

CN 7-Nonen-2-one, 4,8-dimethyl- (CA INDEX NAME)



IT 3664-64-0F  
(prepn. of)

L18 ANSWER 32 OF 41 ZCA COPYRIGHT 2008 ACS on STN

AN 92:111168 ZCA Full-text

OREF 92:18153a,18156a

TI A search for new aroma chemicals - structural modification of citronellal. Part I

AU Sethi, V. K.; Dhar, K. L.; Atal, C. K.; Dewan, R. K.

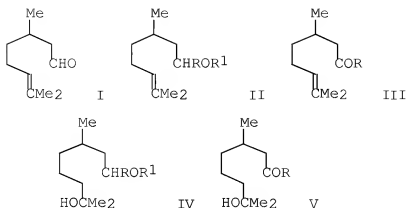
CS Reg. Res. Lab., Jammu Tawi, 180001, India

SO Indian Perfumer (1978), 22(4), 225-8  
CODEN: IPERAS; ISSN: 0019-607X

DT Journal

LA English

GI

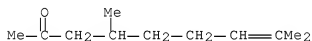


AB Citronellal (I), isolated from Eucalyptus citriodora oil, was converted to higher homologs (II, R = Me, Et, CHMe<sub>2</sub>, R<sup>1</sup> = H) with Grignard reactions. These were subjected to Sarett's oxidn. to give III and acetylation to give II (R<sup>1</sup> = Ac). II (R<sup>1</sup> = H) were hydroxylated by oxymercuration demercuration to give IV (R<sup>1</sup> = H) which were oxidized to V and acetylated to give IV (R<sup>1</sup> = Ac). All compds. gave different odors, with citronellyl iso-Pr ketone (III, R = CHMe<sub>2</sub>) giving the best odor.

IT 3664-64-0P  
(prepn. of, for possible perfume component)

RN 3664-64-0 ZCA

CN 7-Nonen-2-one, 4,8-dimethyl- (CA INDEX NAME)



IT 3664-64-0P  
(prepn. of, for possible perfume component)

L18 ANSWER 33 OF 41 ZCA COPYRIGHT 2008 ACS on STN

AN 86:140298 ZCA [Full-text](#)

OREF 86:22041a,22044a

TI Alkoxy substituted aliphatic di-olefinic halides

IN Henrick, Clive A.; Siddall, John B.

PA Zoecon Corp., USA

SO U.S., 14 pp. Division of U.S. 3,890,398.

CODEN: USXXAM

DT Patent  
LA English  
FAN.CNT 7

	PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
PI	US 3970704	A	19760720	US 1975-560851	197503 21
				<--	
	US 3729486	A	19730424	US 1971-111650	197102 01
				<--	
	US 3706733	A	19721219	US 1971-115725	197102 16
				<--	
	US 3755411	A	19730828	US 1971-187897	197110 08
				<--	
	ZA 7107375	A	19730627	ZA 1971-7375	197111 03
				<--	
	AT 319909	B	19750110	AT 1972-316	197201 14
				<--	
	US 3890398	A	19750617	US 1972-217930	197201 14
				<--	
	BE 778242	A1	19720516	BE 1972-113026	197201 19
				<--	
	SE 386161	B	19760802	SE 1972-831	197201 25
				<--	
	BR 7200434	D0	19730830	BR 1972-434	197201 27
				<--	
	IT 961136	B	19731210	IT 1972-19871	

				197201 27
			<--	
CH 605585	A5	19780929	CH 1975-5414	
				197201 28
			<--	
RO 62490	A1	19771215	RO 1972-69767	
				197202 15
			<--	
US 3803185	A	19740409	US 1972-266031	
				197206 26
			<--	
US 3781322	A	19731225	US 1972-281887	
				197208 18
			<--	
US 3832361	A	19740827	US 1972-281898	
				197208 18
			<--	
US 3838176	A	19740924	US 1972-281885	
				197208 18
			<--	
US 3882156	A	19750506	US 1972-302982	
				197211 01
			<--	
SU 997605	A3	19830215	SU 1973-1875704	
				197301 25
			<--	
ES 411464	A2	19760416	ES 1973-411464	
				197302 09
			<--	
AT 7400090	A	19751115	AT 1974-90	
				197401 07
			<--	
AT 331557	B	19760825		
PRAI US 1971-111650	A2	19710201	<--	
US 1971-111702	A2	19710201	<--	
US 1971-111765	A2	19710201	<--	

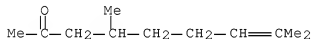
US 1971-111766 A2 19710201 <--  
 US 1971-111770 A2 19710201 <--  
 US 1971-115725 A2 19710216 <--  
 US 1971-187897 A2 19711008 <--  
 US 1972-217930 A3 19720114 <--  
 US 1971-201191 A2 19711122 <--  
 US 1971-206174 A2 19711208 <--  
 AT 1972-316 A 19720114 <--  
 CH 1972-1266 A 19720128 <--  
 US 1972-226147 A 19720214 <--  
 US 1972-266030 A2 19720626 <--

AB About 30 alkatrienoic acids [Me2C:CH(CH2)2CHMeCH2CH:CHCMe:CHR (I), R = CO2Et, CO2H, CH2NH2, CH2OH, etc.] or alkadienoic acid derivs. [R1CH2CMeR2(CH2)3CHMeCH2CH:CHCMe:CHCO2R3, R1 = Cl, F, EtO, AcO; R2 = H, Cl, F; R3 = Et, H, CHMe2, K, etc.], useful as insecticides (no data), were prepd., e.g., by Wittig reaction. Thus, 1 g Me2C:CHCH2CH2CHMeCH2CHO was treated with (EtO)2P(O)CH2CMe:CHCO2Et in DMF contg. NaOEt to give I (R = CO2Et) (no yield given).

IT 3664-64-0P  
 (prepn. of)

RN 3664-64-0 ZCA

CN 7-Nonen-2-one, 4,8-dimethyl- (CA INDEX NAME)



IT 3664-64-0P  
 (prepn. of)

L18 ANSWER 34 OF 41 ZCA COPYRIGHT 2008 ACS on STN  
 AN 84:31274 ZCA Full-text  
 OREF 84:5125a,5128a  
 TI 2,4-Dienoic acid esters as insect control agents  
 IN Henrick, Clive A.; Siddall, John B.  
 PA Zoecon Corp., USA  
 SO U.S., 21 pp.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 FAN.CNT 7

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
-----				

PI	US 3912815	A	19751014	US 1974-437438	197401 28
				<--	
	US 3729486	A	19730424	US 1971-111650	197102 01
				<--	
	US 3706733	A	19721219	US 1971-115725	197102 16
				<--	
	US 3755411	A	19730828	US 1971-187897	197110 08
				<--	
	ZA 7107375	A	19730627	ZA 1971-7375	197111 03
				<--	
	AT 319909	B	19750110	AT 1972-316	197201 14
				<--	
	BE 778242	A1	19720516	BE 1972-113026	197201 19
				<--	
	SE 386161	B	19760802	SE 1972-831	197201 25
				<--	
	BR 7200434	D0	19730830	BR 1972-434	197201 27
				<--	
	IT 961136	B	19731210	IT 1972-19871	197201 27
				<--	
	CH 605585	A5	19780929	CH 1975-5414	197201 28
				<--	
	RO 62490	A1	19771215	RO 1972-69767	197202 15

US 3904662	A	19750909	US 1972-263903	<--	197206 19
US 3803185	A	19740409	US 1972-266031	<--	197206 26
US 3781322	A	19731225	US 1972-281887	<--	197208 18
US 3832361	A	19740827	US 1972-281898	<--	197208 18
US 3838176	A	19740924	US 1972-281885	<--	197208 18
US 3882156	A	19750506	US 1972-302982	<--	197211 01
BE 791621	A4	19730521	BE 1972-124362	<--	197211 20
SU 997605	A3	19830215	SU 1973-1875704	<--	197301 25
ES 411464	A2	19760416	ES 1973-411464	<--	197302 09
AT 7400090	A	19751115	AT 1974-90	<--	197401 07
AT 331557	B	19760825		<--	
PRAI US 1971-111650	A2	19710201	<--		
US 1971-111702	A2	19710201	<--		
US 1971-111765	A2	19710201	<--		
US 1971-111766	A2	19710201	<--		
US 1971-111770	A2	19710201	<--		



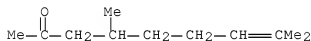
US	1971-115725	A2	19710216	<--
US	1971-187897	A2	19711008	<--
US	1971-206174	A2	19711208	<--
US	1972-224261	A2	19720207	<--
US	1972-263903	A3	19720609	<--
US	1971-201191	A2	19711122	<--
AT	1972-316	A	19720114	<--
BE	1972-778242	A	19720119	<--
CH	1972-1266	A	19720128	<--
US	1972-226147	A	19720214	<--
US	1972-266030	A2	19720626	<--

AB About 20 Me2CR1CHR2CH2CH2CHMeCH2CH:CHCMe:CHCO2R (I, R = Et, Me, CHMe2, CH2CHMe2, CHMeEt; R1 = Cl, F, OH, OEt, OAc, cyclohexyloxy, OCHO, OMe, OCHMe2; R2 = H, Cl, F), useful as insecticides by inhibiting metamorphosis, were prepd. by addn. of R1R2 to Me2C:CHCH2CH2CHMeCH2CH:CMc:CHCO2R (II), obtained by reaction of Me2C:CHCH2CH2CHMeCH2CHO (III) with (EtO)2P(:O)CH2CMe:CHCO2R (IV). Thus, 1 g III was treated with 1.5 g IV (R = Et) in DMF contg. NaOEt to give II (R = Et), which (1 g) was hydrofluorinated in THF at 0° for 15 hr to give I (R = Et, R1 = F, R2 = H). I (R = CHMe2, R1 = OMe, R2 = H) was effective against Merchant grain beetle, almond moth, and sawtoothed grain beetle.

IT 3664-64-0P  
(prepn. of)

RN 3664-64-0 ZCA

CN 7-Nonen-2-one, 4,8-dimethyl- (CA INDEX NAME)



IT 3664-64-0P  
(prepn. of)

L18 ANSWER 35 OF 41 ZCA COPYRIGHT 2008 ACS on STN

AN 84:31273 ZCA Full-text

OREF 84:5125a,5128a

TI 2,4-Dienoic acids, esters, and derivatives

IN Henrick, Clive A.; Siddall, John B.

PA Zoecon Corp., USA

SO U.S., 21 pp.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 7

	PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
PI	US 3904662	A	19750909	US 1972-263903	197206 19
				<--	
	US 3729486	A	19730424	US 1971-111650	197102 01
				<--	
	US 3706733	A	19721219	US 1971-115725	197102 16
				<--	
	US 3755411	A	19730828	US 1971-187897	197110 08
				<--	
	ZA 7107375	A	19730627	ZA 1971-7375	197111 03
				<--	
	AT 319909	B	19750110	AT 1972-316	197201 14
				<--	
	BE 778242	A1	19720516	BE 1972-113026	197201 19
				<--	
	SE 386161	B	19760802	SE 1972-831	197201 25
				<--	
	BR 7200434	D0	19730830	BR 1972-434	197201 27
				<--	
	IT 961136	B	19731210	IT 1972-19871	197201 27
				<--	
	CH 605585	A5	19780929	CH 1975-5414	197201 28

RO 62490	A1	19771215	RO 1972-69767	<--	197202 15
US 3803185	A	19740409	US 1972-266031	<--	197206 26
US 3781322	A	19731225	US 1972-281887	<--	197208 18
US 3832361	A	19740827	US 1972-281898	<--	197208 18
US 3838176	A	19740924	US 1972-281885	<--	197208 18
US 3882156	A	19750506	US 1972-302982	<--	197211 01
BE 791621	A4	19730521	BE 1972-124362	<--	197211 20
SU 997605	A3	19830215	SU 1973-1875704	<--	197301 25
ES 411464	A2	19760416	ES 1973-411464	<--	197302 09
AT 7400090	A	19751115	AT 1974-90	<--	197401 07
AT 331557	B	19760825		<--	
US 3912815	A	19751014	US 1974-437438		197401 28
PRAI US 1971-111650	A2	19710201	<--	<--	

US 1971-111702	A2	19710201	<--
US 1971-111765	A2	19710201	<--
US 1971-111766	A2	19710201	<--
US 1971-111770	A2	19710201	<--
US 1971-115725	A2	19710216	<--
US 1971-187897	A2	19711008	<--
US 1971-206174	A2	19711208	<--
US 1972-224261	A2	19720207	<--
US 1971-201191	A2	19711122	<--
AT 1972-316	A	19720114	<--
BE 1972-778242	A	19720119	<--
CH 1972-1266	A	19720128	<--
US 1972-226147	A	19720214	<--
US 1972-263903	A3	19720609	<--
US 1972-266030	A2	19720626	<--

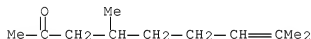
AB About 30 Me2CR1CHR2CH2CH2CHMeCH2CH:CHCMe:CHCO2R (I, R = Et, H, CMe3, CHMe2, CH2CHMe2, CHMeEt, CH2CH:CHMe, CH2CH:CH2, CH2CH2CH:CH2, CHMeCH:CH2, CH2C.tplbond.CH, cyclopropyl, cyclopentyl; R1 = F, Cl, OH, OEt, OAc, OMe, OCHO, OCHMe2; R2 = H, Cl, F), useful for control of peach aphid, Indian meal moth, Merchant grain beetle, and almond moth by inhibiting metamorphosis, were prepd. by addn. of R1R2 to Me2C:CHCH2CH2CHMeCH2CH:CHCMe:CHCO2R (II), obtained by reaction of Me2C:CHCH2CH2CHMeCH2CHO (III) with (EtO)2P(:O)CH2CMe:CHCO2R (IV). Thus, 1 g III was treated with 1.5 g IV (R = Et) in DMF contg. NaOEt to give II (R = Et), which (1 g) was hydrofluorinated in THF at 0° for 15 hr to give I (R = Et, R1 = F, R2 = H).

IT 3664-64-0P

(prepn. of)

RN 3664-64-0 ZCA

CN 7-Nonen-2-one, 4,8-dimethyl- (CA INDEX NAME)



IT 3664-64-0P

(prepn. of)

L18 ANSWER 36 OF 41 ZCA COPYRIGHT 2008 ACS on STN

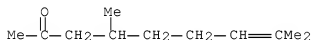
AN 83:43514 ZCA Full-text

OREF 83:6899a,6902a

TI Synthesis and physiological tests of substances possessing insect juvenile hormone activity

AU Kuznetsov, N. V.; Guzenok, N. Kh.; Myrsina, R. A.; Svishchuk, A. A.

CS Inst. Org. Khim., Kiev, USSR  
 SO Fiziologicheskii Aktivnye Veshchestva (1966-1992) (1974),  
 6, 105-10  
 CODEN: FAVUAI; ISSN: 0533-1153  
 DT Journal  
 LA Russian  
 GI For diagram(s), see printed CA Issue.  
 AB Sesquiterpenoids possessing insect juvenile hormone activity, e.g. I  
 [R1 = Me, R2 = Me, Et, R3 = Me2C:CHCH2CH2, H[CH2CMe:CH2CH2]2CH2] were  
 obtained in 34-42% yields by Grignard reactions of esters II (R1 = H,  
 Me). Addnl. obtained were 12 esters and ketones which had activities  
 of 0.05 µg/pupa for I (R1 = Me, R2 = Et, R3 = Me2C:CHCH2CH2) to 250  
 mg/pupa for Me2C:CHCH2CH2CMe:CHCH2CH2CMe. Grignard reactions of I  
 led to R1COCH:CR2R3[R1 = Me, H, R2 = Me, Et, R3 = Me, MeC6H4,  
 Me2C:CHCH2CH2, C9H19, EtMeC:CHCH2CH2, H[CH2MeC:CHCH2CH2]2CH2,  
 H[CH2EtC:CHCH2CH2]2CH2].  
 IT 3664-64-0  
 (juvenile hormone activity of)  
 RN 3664-64-0 ZCA  
 CN 7-Nonen-2-one, 4,8-dimethyl- (CA INDEX NAME)



IT 3664-64-0  
 (juvenile hormone activity of)  
 L18 ANSWER 37 OF 41 ZCA COPYRIGHT 2008 ACS on STN  
 AN 78:110626 ZCA Full-text  
 OREF 78:17758h,17759a  
 TI Aliphatic unsaturated compounds and their insecticidal compositions  
 IN Henrick, Clive A.; Siddall, John B.  
 PA Zoecon Corp.  
 SO Ger. Offen., 113 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 FAN.CNT 7

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	
PI	DE 2202021	A1	19721026	DE 1972-2202021	197201

			<--	17
DE 2202021	C3	19790201		
US 3729486	A	19730424	US 1971-111650	19710201
			<--	
US 3706733	A	19721219	US 1971-115725	19710216
			<--	
US 3755411	A	19730828	US 1971-187897	19711008
			<--	
ZA 7107375	A	19730627	ZA 1971-7375	19711103
			<--	
US 3732282	A	19730508	US 1971-196800	19711108
			<--	
CA 984406	A1	19760224	CA 1971-127231	19711109
			<--	
AU 7136209	A	19730531	AU 1971-36209	19711126
			<--	
GB 1368267	A	19740925	GB 1971-55201	19711129
			<--	
IL 38487	A	19760331	IL 1971-38487	19711230
			<--	
US 3839452	A	19741001	US 1972-217297	19720112
			<--	
AT 319909	B	19750110	AT 1972-316	19720114
			<--	

BE 778242	A1	19720516	BE 1972-113026	197201 19
SE 386161	B	19760802	SE 1972-831	197201 25
JP 55033414	B	19800830	JP 1972-9423	197201 25
FR 2124280	A1	19720922	FR 1972-2778	197201 27
FR 2124280 BR 7200434	B1 D0	19780519 19730830	BR 1972-434	197201 27
IT 961136	B	19731210	IT 1972-19871	197201 27
CH 604519	A5	19780915	CH 1972-1266	197201 28
CH 605585	A5	19780929	CH 1975-5414	197201 28
DD 102562	A5	19731220	DD 1972-160597	197201 31
HU 165778	B	19741028	HU 1972-20115	197201 31
RO 62490	A1	19771215	RO 1972-69767	197202 15
US 3803185	A	19740409	US 1972-266031	197206





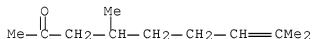
F, OH, acyloxy, hydrocarbyloxy); R1, R4 = lower alkyl; R2, R3 = H or lower alkyl; R5 = CO2R10, COR10, C(O)SR10, COX, CH2X, etc., where R10 = H or hydrocarbyl, X = Br, Cl, or F] were prepd. and were effective insecticides. Thus, 1 g Me2C:CHCH2CH2CHMeCH2CHO and 1.5 g EtO2CCH:CMech2P(O)(OEt)2 reacted in DMF in the presence of EtONa to give (E,E)-I (m = n = 1; R = Me2C:CH2, R1 = R4 = Me, R2 = R3 = H, R5 = CO2Et), which killed Aedes aegypti at 1 ppm for ID50.

IT 3664-64-0P

(prepn. of)

RN 3664-64-0 ZCA

CN 7-Nonen-2-one, 4,8-dimethyl- (CA INDEX NAME)



IT 3664-64-0P

(prepn. of)

L18 ANSWER 38 OF 41 ZCA COPYRIGHT 2008 ACS on STN

AN 72:21261 ZCA Full-text

OREF 72:3869a,3872a

TI Addition of Grignard reagents based on the double bond of crotonic acid esters and ethylidene acetone

AU Kuznetsov, N. V.; Guzenok, N. Kh.

CS Inst. Org. Khim., Kiev, USSR

SO Dopovidi Akademii Nauk Ukrain's'koi RSR, Seriya B: Geologiya, Geofizika, Khimiya ta Biologiya (1969), 31(10), 908-10

CODEN: DBGGAM; ISSN: 0002-3523

DT Journal

LA Ukrainian

GI For diagram(s), see printed CA Issue.

AB Esters of d,l-citronellic acid (I) were obtained by a general method exemplified by the following procedure: 1.25 g iso-Pr crotonate in 10 ml Et2O was added at -5° over 3 hr to a Grignard soln. prepd. from 5.25 g 5-bromo-2-methyl-2-pentene (II), 0.6 g Mg, and 8 ml Et2O. In the case of Et crotonate and ethylideneacetone (III) the reactions were carried out in the presence of 0.1 g Cu2Cl2. Conventional workup gave 50-70% I esters, sapon. of which with alc. NaOH gave 70% I, b10 144-5°, n15D 1.4630. Grignard reagents obtained from II, PhBr, and iso-C5H11Br add far more readily to et ethylideneacetoacetate ester (IV) than to alkyl crotonates and III. Thus, 7.8 g IV (prepn. described) was added dropwise to the Grignard reagent obtained from 1.2 g Mg, 7.8 g PhBr, and 40 ml Et2O, at <-10°, and the mixt. was

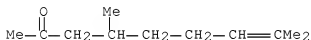
kept 1 hr <-10° and worked up to give Et 2-acetyl-3-phenylbutyrate. Grignard reagents did not add to cyclic unsatd. esters. The phys. consts. of R1CHMeCHR2COR3 obtained are shown in the table.

IT 3664-64-0P

(prepn. of)

RN 3664-64-0 ZCA

CN 7-Nonen-2-one, 4,8-dimethyl- (CA INDEX NAME)



IT 3664-64-0P

(prepn. of)

L18 ANSWER 39 OF 41 ZCA COPYRIGHT 2008 ACS on STN

AN 68:95127 ZCA Full-text

OREF 68:18311a,18314a

TI Thermal cyclization of  $\epsilon,\zeta$ -unsaturated ketones

AU Le Perchec, Pierre

CS Fac. Sci. Caen, Caen, Fr.

SO Annales de Chimie (Paris, France) (1967), 2(5), 263-8

CODEN: ANCPAC; ISSN: 0151-9107

DT Journal

LA French

AB The thermal cyclization of  $\epsilon,\zeta$ -unsatd. ketones was investigated. Heating 7-octen-2-one (I) for 30 min. in a sealed tube at 370° gave a 93:7 mixt. of trans-2- methylacetylcyclopentane and the cis isomer. Other ketones were thermally cyclized in a similar manner [starting material and product(s) given]: 3-methyl-7-octen-2-one, trans-1,2-dimethyl- acetylcyclopentane; 7-methyl-7-octen-2-one, 2,2-dimethylacetyl- cyclopentane; 7-methyl-7-octen-2-one, 2,2-dimethylacetyl- cyclopentane; 7-methyl-7-octen-2-one, 2,2-dimethylacetylcyclopentane;

4,8-dimethyl-7-nonen-2-one, 2-isopropyl-5-methylcyclopentane and 2,4-dimethylcumene; 3-carbethoxy-7-octen-2-one, trans-1-carbethoxy-2-methylacetylcyclopentane; and 6-benzoyl-1-heptene, trans-1,2-dimethylbenzoylcyclopentane. Similar treatment of 3-carbethoxy-3-methyl-7-octen-2-one gave trans-1,2- dimethylacetylcyclopentane by decarboxylation. Similar heating of the enol acetate, the ethylene ketal, the di-Me ketal, the di-Et ketal, and the corresponding enol ethers of I also gave the thermocyclization ketone. The cis stereochemistry for the thermocyclization for  $\epsilon,\zeta$ -unsatd. ketones, the thermocyclization of  $\alpha$ -deuterated  $\epsilon,\zeta$ -unsatd. ketones, the 1st

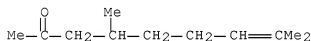
order rate const. for this reaction, and the migration of the Me group in the thermal cyclization of Me enol ethers of I support an intramol. mechanism involving transfer of the enol H to the terminal methylene group and the ring-closing formation of the  $\alpha,\epsilon$ -bond. Thermal rearrangements of  $\alpha$ -allyl- $\beta,\gamma$ -unsatd. ketones involve 2 steps, i.e. Cope rearrangement followed by thermal cyclization of the  $\alpha,\beta:$   $\epsilon,\zeta$ -unsatd. ketones formed.

IT 3664-64-0

(ring closure of)

RN 3664-64-0 ZCA

CN 7-Nonen-2-one, 4,8-dimethyl- (CA INDEX NAME)



IT 3664-64-0

(ring closure of)

L18 ANSWER 40 OF 41 ZCA COPYRIGHT 2008 ACS on STN

AN 67:53740 ZCA Full-text

OREF 67:10071a,10074a

TI Thermolysis and photolysis of unsaturated ketones.V. Thermal cyclization of aliphatic  $\epsilon,\zeta$ -ethylenic ketones

AU Rouessac, Francis; Le Perchec, Pierre; Conia, Jean M.

CS Fac. Sci. Caen, Caen, Fr.

SO Bulletin de la Societe Chimique de France (1967), (3), 818-22

CODEN: BSCFAS; ISSN: 0037-8968

DT Journal

LA French

OS CASREACT 67:53740

GI For diagram(s), see printed CA Issue.

AB cf. CA 65: 13563b. Compds. of the general formula  $\text{AcCHRCHR1CH2CH2CR2:CR32}$ , where R, R1, and R2 are H, Me, or  $\text{CO}_2\text{Et}$  and R3 is H or Me, are heated to give 2-alkyl-1-acetylcyclopentanes by the mechanism shown. Thus,  $\text{AcCH}_2\text{CO}_2\text{Et}$  is treated with  $\text{CH}_2:\text{CH}(\text{CH}_2)_3\text{Br}$  in the presence of  $\text{NaOEt}$  to give 3-carboethoxy-7-octen-2-one (I), b20 120-2°, n20D 1.4408. Decarboethoxylation (Le Bel, et al, CA 61:10671a) of I gives 78% 7-octen-2-one, b. 176°, n20D 1.4250. 7-Octen-2-one is heated to give .apprx.90% mixt. contg. 7% cis-2-methylacetylcyclopentane, n22.5D 1.4455, and 93% trans-2-methylacetylcyclopentane, n21D 1.4390. Similarly prepd. are (alkenone reactant given): 1-carboethoxy-2-methylacetylcyclopentane (II) (n23D

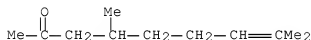
1.4502), I; trans-1,2- dimethylacetylcyclopentane (III) (n19.5D 1.4493; 2,4-dinitrophenylhydrazone m. 115-16°), 3-methyl-7-octen-2-one; 2,2-dimethylacetylcyclopentane (semicarbazone m. 173°), 7-methyl-7-octen-2-one; a mixt. of 2,4-dimethylcumene and 2-isopropyl-5-methylacetylcyclopentane isomers (n18D 1.4526), 4,8-dimethyl-7-nonen-2-one (IV); trans-1,2-dimethyl - 1 - benzoylcyclopentane (2,4-dinitrophenylhydrazone m. 143°), 6-benzoyl-1-heptene. II is heated 2 hrs. at 40° with 400 mg. NaOH in 10 ml. water to give trans-2-methylacetylcyclopentane. III is treated with NaOI to give trans-1,2-dimethylcyclopentanecarboxylic acid, m. 46° (amide m. 98°). Also prepd. are (b.p./mm., n25D, and m.p. 2,4-dinitrophenylhydrazone given): 3-methyl-7-octen-2-one, 182°/760, 1.4300, 43°; 7-methyl-7-octen-2-one, - (n23D 1.4370), 58°; IV, -, -, 61°; 6-benzoyl-1-heptene, 90-3°/0.15, -, 81°.

IT 3664-64-0P

(prepn. of)

RN 3664-64-0 ZCA

CN 7-Nonen-2-one, 4,8-dimethyl- (CA INDEX NAME)



IT 3664-64-0P

(prepn. of)

L18 ANSWER 41 OF 41 ZCA COPYRIGHT 2008 ACS on STN

AN 63:88482 ZCA Full-text

OREF 63:16223a-e

TI Thermal cyclization of  $\alpha,\zeta$ -ethylenic ketones

AU Rouessac, Francis; Conia, Jean Marie

CS Univ. Caen, Fr.

SO Tetrahedron Letters (1965), (37), 3313-18

CODEN: TELEAY; ISSN: 0040-4039

DT Journal

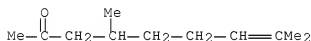
LA French

GI For diagram(s), see printed CA Issue.

AB The monoethylenic ketones (I, all groups H) (II); (I, all groups H except R1 = Me) (III); (I, all groups H except R1 = CO2Et) (IV); (I, all groups H except R3 = Me) (V); (I, all groups H except R2 = R4 = R5 = Me) (VI) heated in sealed pyrex tubes and the products sepd. by vapor phase chromatography gave 1-acetyl-2-alkylcyclopentanes (VII). Treatment of AcCH2CO2Et with BrCH2CH2CH2CH2 in the presence of NaOEt gave IV, b20 120-2°, v 1735, 1710 cm.-1, de-carboxylated to II,

b. 176°,  $\delta$  2.02 ppm. [dinitrophenylhydrazine (DNP) m. 64°]. Methylation of IV gave 3-carbethoxy-3-methyl-7-octen-2-one (VIII), b20 130°, v 1730, 1710 cm.-1,  $\delta$  2.03, 1.24 ppm., converted by alk. decarbethoxylation to III, b. 182°, 1.04 ppm. (J 6 cycles/sec.); DNP, m. 42°. II, III, IV, and VIII gave intense N.M.R. peaks between 4.70 and 6.10 ppm. characteristic of allyl group olefinic protons, absent in the cyclic VII. Wittig reaction between 2,7-octanedione and Ph3PMeBr gave V,  $\delta$  1.69, 4.64 ppm. (DNP m. 58°). Treatment of citronellal with MeMgI and oxidn. of the 4,8-dimethyl-2-hydroxy-7-nonene with CrO3-C5H5N gave VI, b16 102°,  $\delta$  0.92, 5.27 ppm. (DNP m. 61°). II heated 2 hrs. at 330° or 30 min. at 370° gave a quant. yield of a mixt. of 5-7% cis-2-methyl-1-acetylcyclopentane,  $\delta$  0.81 ppm. (J 6.0 cycles/sec.) (DNP m. 117°); and 93-5% trans-2-methyl-1-acetylcyclopentane,  $\delta$  1.01 (J 6.5 cycles/ sec.) (DNP m. 109°). III heated 30 min. at 370° gave a quant. yield of trans-1,2-dimethyl-1-acetyl-cyclopentane (IX),  $\delta$  0.86, 1.20, 2.03 ppm. (DNP m. 116°). IX treated with NaOBr gave an acid, characterized as amide, m. 98°. IV heated 20 hrs. at 250° or 1 hr. at 300° gave quant. 1-carbethoxy-2-methyl-1-acetylcyclopentane, v 1735, 1705 cm.-1  $\delta$  0.90 ppm., decarbethoxylated to the same mixt. as obtained by thermal cyclization of II. V heated 2 hrs. at 330° gave the known 2,2-dimethyl-1-acetylcyclopentane,  $\delta$  0.86, 1.19, 2.05 ppm.; semicarbazone m. 173°. VI heated under similar conditions gave 60% yields of ketones, consisting mainly of stereoisomeric 2-isopropyl-5-methyl-1-acetylcyclopentanes,  $\delta$  2.07, 1.01, 0.80, 0.87 ppm.

II 3664-64-0, 7-Nonen-2-one, 4,8-dimethyl-  
(cyclization of)  
RN 3664-64-0 ZCA  
CN 7-Nonen-2-one, 4,8-dimethyl- (CA INDEX NAME)



II 3664-64-0, 7-Nonen-2-one, 4,8-dimethyl-  
(cyclization of)